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The Threat of Rising Sea Levels

Mina Tamura

Sea levels have been rising globally and it is said that the sea level around the world rose slightly more than 6.6cm from 1993 to 2014. Especially, many small islands are faced with this problem. The Republic of Maldives is one of the most vulnerable and endangered countries in terms of sea levels. The Maldives is a country located in the Indian ocean. It has more than 1200 islands and its population is approximately 436 thousand. Around 300 islands are inhabited and used for tourism while 900 islands are still uninhabited. The main industries are tourism and fisheries because this country is surrounded by beautiful ocean and many tourists visit the country to see the coral reefs under the water and to enjoy water sports and leisure activities. However, sea levels around the Maldives has been rising 0.8-1.6mm per year since the 1950s. The country can lose its land due to the rise in sea levels and more than half of its land area will be covered by seawater by the end of this century, according to the Union of Concerned Scientists. The former president of the Maldives, Mohamed Nasheed, said "If carbon emissions continue at the rate they are climbing today, my countries will be underwater in seven years." He was thinking that he could buy lands somewhere to move the population from uninhabitable lands. Sea level rising is a remarkably serious problem to the people who live in the Maldives. In order to understand the current situation of the issue and people's lives in the Maldives, it is crucial to consider the causes, effects, and solutions to sea levels rising.

I

I will discuss causes of rising sea levels, global warming, thermal expansion of seawater and melting of ice, to determine if human activities have negative effects on this problem.

Global warming is the biggest cause of rising sea level. People use fossil fuels for their convenience and greenhouse gases are emitted by burning them. For instance, carbon dioxide contributes global warming the most and methane is the second biggest factor. 64% of methane emissions come from human related sources which are fossil fuel production and livestock farming. Due to these human activities, the temperature all around the world goes up higher and higher which is known as global warming. Furthermore, the ocean receives 80-90 percent of heat and this leads to other two main causes of rising sea levels which are thermal expansion and melting of ice.

One of the causes of sea level rise which is interconnected to global warming is thermal expansion of seawater. When water becomes warmer, its volume expands. Even if the mass of water is constant, the volume increases. Global warming is the cause of thermal expansion because it warms up seawater. Its process needs a massive amount of time and it is very slow but it certainly attributes to rising sea level. Sea level rises 0.6mm per year due to thermal expansion. It is said that 70 -75% of rising sea level is caused by thermal expansion in the future, according to IPCC.

Another cause of the rise in sea level interconnected to global warming is melting of ice, such as glaciers and ice sheets. Normally, the ice melts in summer and it freezes again in winter. However, because of global warming, the length of each season is changing and it brings long periods of summer and short periods of winter. Therefore, the amount of water melting in summer is greater than the amount of water evaporated in winter. This means that glaciers and ice sheets have been shrinking and much more seawater is added to the ocean. 1.8mm of sea levels is rising per year by this cause.

II

I am going to look at three impacts of sea level rising in the Republic of the Maldives, which are the loss of its land, people's lives and its tourism, in order to understand what has been happening in the country due to this problem.

One of the biggest problems caused by sea level rise is the loss of the Maldives' land. Seawater covers its land little by little as its level is rising. Also, when such a large volume of water moves fast, it leads to erosion, which the land of the Maldives has been losing gradually. There is concern that the number of islands that are inhabited will fall in the future. Due to the loss of land, it causes other severe problems such as loss of housing and jobs. Many people could be homeless and people who lose their jobs will not be able to pay for things that are essential to live. In addition, it is said that 400,000 people could become environmental refugees which means people who have had to leave places in which they have lived due to environmental problems. If people become environmental refugees, their culture and communities may be affected. Additionally, housing and critical infrastructure and airports and over 120 harbours are located along coastlines. If these places stop working eventually, people in the Maldives will not be able to live in the way they have used to live.

The rise in sea level also affects negatively to the daily lives of people who live in the Maldives. The soil in the Maldives is damaged since seawater has been reaching to its soil and the water contains salt. The fertility of the

soil is becoming worse and it has bad effects on agriculture in the country, such as crop production and fishing. Furthermore, fresh water that people drink could be polluted because more floods are likely to happen due to rising sea level. More than 90 of the inhabited islands experience floods every year. Even if the increase of the sea level is small, it definitely could worsen the environmental problem in the country. When floods occur, it requires money to repair damages but it is also expensive to build flood defenses. More money has to be spent on defense rather than other public service and development. People might not get enough treatment. They also have a problem which is a lack of freshwater resources because high removal levels have made its groundwater aquifers vulnerable to inundation by seawater. According to Union of Concerned Scientists, about 87 percent of population drink water which is provided the nation and the nation collects it from rainwater. Groundwater is used for both non-drinking purposes and for drinking water during dry season months.

Tourism in the Maldives is also affected by sea level rise. The Maldives' main industry is the beachfront resorts because tourists visit the Maldives to see its beautiful coral reefs. However, tourism is affected by rising sea level and a fall of the number of tourists has a negative influence on its economy. Coral reefs and organisms have been killed by seawater. Furthermore, vegetation has been killed by the forces of water as well. The flow of the water topsoil as well, and when they remain in seawater, they will rot. In 2016, due to the influence of the El Nino weather phenomenon, over 60 percent of the corals was bleached in an area where sand is added for reclamation, according to New Scientist. It may take a decade that the corals recover. Damages of coral-reefs affect diving tourism, also. The major features of tourism might be lost.

III

I am going to look at solutions to rise in sea levels which the Maldives could adopt; to construct artificial islands, to reduce the amount of the use of fossil fuels and to maintain the Maldivian natural environment, to determine which action is better to take in terms of finance and the environment.

One solution which reduces the negative effects of sea level rise is to create artificial islands. The Maldives already constructed an artificial island called Hulhumale which is several feet higher than the other areas of the Maldives. There are new hospitals, schools, houses and government buildings which are necessary for people in the island. It was built by engineers and was created by dredging lots of sand from the bottom of the sea. The sand was poured out into the shallow lagoon so that this island is classified as a flood resistant island. Constructing safer places to people will help the country from rising sea level. Also, another artificial island is under construction and it will finish by 2023. It is estimated that about 130 thousand people will be able to live in the island in the future. Shiham Adam, director of the Maldives Marine Research centre, thinks that reclaiming islands is one of the best solutions to the rise in sea levels due to climate change because people do not need to leave their country and building islands needs simple processes. However, this idea has disadvantages because it needs lots of money to build new islands and the environment around the country might be negatively affected. A strategy to get more money is renting out islands which the Maldives has to other countries so that the money can be used to build new artificial islands. In addition, the government tries to be careful about the damage caused by the projects to keep as much coral area as possible. They have decided that some corals will be relocated to avoid being killed and this process will be standardised for every other construction of artificial islands because corals around the construction might be smothered with the sand used to build islands.

There is another approach to mitigate the effects of sea level rise that is to become a carbon neutral country. A carbon neutral country means that energy the country uses is generated from renewable sources such as wind and solar power. By adopting the idea, the amount of carbon emissions the country produces will be significantly reduced. This helps to stop climate change which also mitigates the impacts of the rise in sea level. Some developing countries argue that developed countries produced a lot of carbon emissions to develop in the past so developing nations should have rights to do the same. However, the former President of the Maldives, Mohamed Nasheed, introduced leapfrogging technology. This is an idea that areas which do not have enough technology to advance can develop rapidly by installing modern technology without going through the middle processes. In this case, the Republic of the Maldives does not have enough advanced technology and they can develop by using renewable sources without using lots of non-renewable resources. Also, development is about what people want to do, not a thing that the government can force them to do because people and the natural environment should live together and people cannot live without it.

The other solution is to develop buffer zones by maintaining the natural system that the Maldives has. Buffer zones are areas which protect coastline from erosion by the forces of water, for example, wetlands, barrier islands and coral reefs. The Maldives' coral reefs and a lagoon between the reef and the beach are natural defense system and they protect the islands from shrinking. However, they are on the brink of being smothered away due to the rise in sea levels. The Maldives needs to foster the ecosystem again, not the sea walls made of concrete because this does not

harm its natural circumstances. Growing a proper number of mangroves, a type of buffer zones, will mitigate the intensity of waves and will prevent the coastal line from being invaded by sea water. Also, rebuilding coral reefs brings benefits to its economy. Local people who earn money from fishing and selling marine products depend on them. Therefore, they will be helped by the preservation of the coral reefs since they are the main source of income and the stability of the environment is necessary for them. Furthermore, many tourists will visit the Maldives to see beautiful nature and its tourism industry can get profits from visitors. People cannot just use concrete and build walls. It is important to work with nature.

IV

In conclusion, I discussed the rise in sea levels from the three aspects; causes to consider whether human activities affect negatively to this issue, impacts to understand how this phenomenon affects the Maldives, and solutions to sea level rise which the Republic of the Maldives can consider making an action. In the past, the cause of rising sea levels could be natural factors, however, I think that currently human activities for their convenience have affected to the environment negatively. The use of fossil fuels creates a lot of greenhouse gases such as carbon dioxide and methane. They have caused global warming which is the biggest cause of rising sea levels and this causes the loss of land. People might not be able to live in places where they were born and brought up. There is also concern that their traditional culture may disappear. In addition, seawater has brought the Maldives negative impacts that the beautiful corals are killed because of it. To mitigate the negative effects which the rise in sea level has brought to the Maldives, I mentioned three approaches; to build artificial islands, to be a carbon neutral country and to maintain the natural environment which the country originally has. I think it is important that the Maldives try not to destroy the natural environment and try to keep it as much as possible. People who are not faced with rising sea levels also should know about people who are now facing it because these problems have not just happened in the Republic of Maldives but also has happened in many places in the world. The Maldives need to involve other countries to tackle the problem together because the biggest cause of the rise in sea levels is not an issue which is solved by one country. People who live in the Earth must try to stop climate change and global warming and they have responsibilities to achieve this task.

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Artificial Intelligence Shino Watanabe

Artificial Intelligence (AI) has been one of the most controversial field of computer science due to its social, ethical, and philosophical implications. AI is defined as the part of computer science related to designing systems that exhibit the characteristics associated with human intelligence, such as learning, reasoning, speech recognition, decision making, problem solving, language understanding, and so on. By learning from experience, adjusting to new inputs, and processing enormous amount of information, AI makes it possible for machines to perform human-like tasks or also tasks that is beyond human's capacity. Using these technologies, computers can be trained to accomplish specific tasks by processing large amounts of data and recognizing patterns in the data. Today AI is introduced in the technology of chess-playing computers, self-driving cars, and also in Apple's personal assistance, Siri.

I

A connection between machines and human intelligence was first observed in the late 1950s. By the 1950s, a polymath, Alan Turing, explored the mathematical possibility of AI. He suggested that machines can solve problems and make decisions in the same way as humans, by using available information as well as reason. In his 1950 paper "Computing Machinery and Intelligence" he discussed how to build intelligent machines and how to test their intelligence level. However, computers in those days needed a fundamental change, and they were too expensive to lease. These factors kept people away from pursuing machine intelligence.

Norbert Wiener was one of the first to theorize that all intelligent behavior was the result of feedback mechanisms. This discovery had a significant impact on the early development of AI. The first AI program is considered to be The Logic Theorist, designed by Allen Newell, Cliff Shaw, and Herbert Simon in 1955. It was a program designed to mimic humans in the way they solve problems and was funded by Research and Development (RAND) Corporation. This was a further step towards the development of modern AI.

The Logic Theorist was presented at the "Dartmouth Summer Research Project on Artificial Intelligence" hosted by John McCarthy, and Marvin Minsky in 1956. The term Artificial Intelligence was also coined in this year by John McCarthy, who is regarded as the father of AI. He brought top researchers from various fields together for an open-ended discussion, and this conference has catalyzed the next twenty years of AI research, where computers become faster, cheaper, and more accessible. Newell and Simon's General Problem Solver, Joseph Weizenbaum's ELIZA, and McCarthy's LISP (LISt Processing) were some major inventions and was soon adopted by many researchers and is still in use today. These successes convinced government agencies including Defense Advanced Research Projects Agency (DARPA) to fund AI research.

Although AI research experienced a stagnation for a decade, it was relighted in the 1980s. "Deep learning" techniques which allowed computers to learn using experience was popularized by John Hopfield and David Rumelhart, and expert systems which mimicked the decision-making process of a human expert was introduced by Edward Feigenbaum and were used across a wide range of industries. The Japanese government heavily funded these and other AI related attempts as part of their Fifth Generation Computer Project (FGCP). Although it didn't meet most of the goals, the project inspired a talented young generation of engineers and scientists.

The funding of the FGCP was stopped, however, AI thrived in the absence of government funding and public interest. From the 1990s to 2000s, many of the goals of AI research had been achieved. In 1997, IBM's Deep Blue, a chess playing computer program defeated the world chess champion and grandmaster Garry Kasparov for the first time. In the same year, a speech recognition software developed by Dragon Systems was implemented on Windows. Human emotion could also be recognized and displayed by Kismet, a robot developed by Cynthia Breazeal.

AI has become more popular today due to its increased data volumes, advanced algorithms, and improvements in computing power and storage. AI is now used everywhere in the modern society, for example, in smartphones, cars and drones, social media feeds, media streaming services, online ads network and so on, and is becoming ubiquitous. It is already having an enormous impact on us, thus it is not exaggerating to say that AI is affecting our everyday life and decisions. We, who are living the era of AI, ought to consider how to associate with and how to make great use of AI by looking at various aspects of it. This essay will discuss the application, implication, and the future of AI to think about the future where humans and AI are collaborating in the best way.

II

AI has many applications in today's society. AI programs are developed to perform specific tasks and are utilized for a wide range of activities. It has been used to develop and advance, and solve immensely difficult issues in numerous fields and industries, including finance, education, transportation, recruitment, and more. AI application can be grouped into five categories: Reasoning (the ability to solve problems through logical deduction), Knowledge

(the ability to present knowledge about the world), Planning (the ability to set and achieve goals), Communication (the ability to understand spoken and written language), and Perception (the ability to infer things about the world via sounds, images, and other sensory inputs).

AI is currently applied to solve some of the society's biggest challenge. Institutions employ AI to tackle some of the greatest economic and social challenges in the world, and this movement is called AI for good. Some foundations are working with the UN on the SDGs (Sustainable Development Goals). They work on social or economic problems such as food, energy and water, climate change, education, and also gender equality. According to an article published by The Guardian, there are many examples where AI can help humans to prevent future damage and understand better ways to address developmental needs, focusing on sustainability. For example, companies such as Microsoft are using AI to understand land-use patterns and make terrain maps. This helps us to make better decisions of how to use the land and implement appropriate preservation techniques. These informations can also help to preserve biodiversity and the ecosystem.

One of the most famous application of AI is transportation, such as self-driving cars. Cars today have AI-based driver assist features, such as self-parking and advanced cruise controls. AI uses observed data to make or even predict decisions properly. Genetic Algorithms (GAs) and Neural Networks (NNs) are AI methods that can deal with types of unpredictable cases. It has been in development and implemented in various ways. AI is also used to optimize traffic management applications, which in turn reduces waiting times, energy use, and emissions. AI in transportation can provide safe, efficient, and reliable transportation while reducing the negative effects on environment and communities. Fully autonomous cars will be developed in the near future.

AI already has applications in the aviation industry in multiple areas, varying from facial recognition, fuel optimisation, baggage check-in to dealing with customer queries. AI can show improvements in the experience of airport security with its less noticeable procedures. It is desirable for all that personal data and privacy can be used to increase flight security without being noticeable. Applying AI is an intelligent way to do so. AI also facilitates the automation of flights and flight operation through advances in machine vision, which can increase safety and efficiency in highly-structured environments such as airports and airspace. Not only aviation, but machine learning is an effective way to use in any kind of transportation business. AI can improve efficiency and passenger experience, integrate the modalities of transport by collecting and analyzing data about taxis, buses, trains, etc.

AI has its applications in the field of education as well in order to make the best outcome for students by leveraging the best attributes of machines and teachers. It can fill gaps in teaching and learning, and allow teachers and schools to offer better education than ever before. Numbers of companies are creating robots that teach a wide range of subjects, from biology to computer science. In higher education, there have been a rise of intelligent tutoring systems, or ITS, such as SHERLOCK and DARPA. These AI technologies have not become widespread yet due to the high expense or doubt of the effectiveness, however it is predicted that there will be an increased utilization of technologies in the coming years. According to the Artificial Intelligence Market in the US Education Sector report, there will be an expected 47.5% growth in AI in U.S. education. Improvement of natural language processing have also enabled automatic grading of assignments and understanding of student's learning needs, and later led to an increased popularity of Massive Open Online Courses, or MOOCs, which is a online class service that can be use all around the world. Data sets collected from such systems have enabled learning analytics, and have greatly improved the quality of learning on a larger scale. Because the students today will be working in a future where AI is widespread, it is better for students to be exposed to and be using these technologies. AI in education enables collaboration between AI and teachers, differentiated and individualized learning, universal access to all students, and the automation of administration tasks.

The contribution of AI in the field of music is not well known, despite AI and music (AIM) has been a common subject for a long time in several conferences and workshops, including the International Computer Music Conference, the Computing Society Conference and the International Joint Conference on Artificial Intelligence. The application of AI in music composition, performance, theory and digital sound processing is currently being researched. Several music softwares that use AI to produce music have already been developed. AI uses its capability of the AI algorithm to learn from information obtained, to listen to and follow in synchrony with a human performer. It also uses the interactive composition technology, which computer composes music in response to a human performer. Other applications are also used in marketing and consumption. Companies such as Apple and Spotify depend on their user data to have more consumers listen to music or making recommendations to each user according to their preferences. The first paper on algorithmic music composing was published by a R.Kh. Zaripov in 1960, which used the Ural-1 computer. The first piano piece was created by a computer that was capable of pattern recognition in various compositions in 1965, by inventor Ray Kurzweil. The computer could analyze and use the patterns to create new melodies. Many software applications have been invented, including Orb composer, AIVA, and Amper Music.

Another application of AI is in human resources and recruitment. There are mainly three ways AI is being used in this area, which are screening resumes and ranking candidates based on their level of qualification, making prediction of candidate success in given roles through job matching platforms, and rolling out chat bots that can automate repetitive communication tasks. Resume screening typically involves a recruiter or other human resource professional through a database of resumes. Pomato, an AI recruiting software, is creating machine learning algorithms to automate resume screening. It focuses on the automation of validating technical applicants for technical staffing firms. This AI can perform over 200,000 calculations on each resume in a second, and design an interview based on the skills that had been discovered. KE solutions, which is also an AI recruiting software, has developed a recommendation system that rank jobs for candidates, and resumes for employers. Jobster, an employment website developed by KE solutions, uses concept-based search and its accuracy has increased by 80% compared to the traditional applicant tracking system (ATS). It can be seen that these AI technologies significantly helps recruiters to overcome technical barriers. From 2016 to 2017, Unilever, a consumer goods company, used AI to screen all entry level employees. It used games based on neuroscience, recorded interviews, and facial and speech analysis to make prediction of hiring success. Partnered with other companies, they were able to increase the number of their applicants from 15,000 to 30,000 in only a year, and also decreased time to hire and saved 50,000 hours of recruiter time. Another development is in recruiting chatbots. Ari, a recruiting chatbots released by TextRecruit, is designed to hold a two-way text message conversation with a candidate, with automated job posting, advertisement opening, candidate screening, interview scheduling, and candidate relationship nurturing. It is clear that AI is having a massive impact on the recruiting field.

AI is also applied to toys and games. In the 1990s, domestically aimed types of basic AI for education or leisure prospered greatly with the Digital Revolution. It introduced people, especially children, to a life dealing with various types of AI. Tamagotchis, Giga Pets, iPod Touch, and the first widely released robot, Furby, were some leading forms of AI-powered toys and games. An improved type of domestic robot, Aibo was also released, which was a robotic dog with intelligent features and autonomy. AI-enabled toys that use proprietary engines and speech recognition tools can understand conversations, give intelligent responses, and learn quickly. AI has also been applied to video games, for example video game bots, which are designed to substitute as opponents. In video games, AI is used to generate responsive, adaptive, or intelligent behaviors. Non-player characters (NPCs) controlled by AI are similar to human-like intelligence. Since their initiation in the 1950s, AI has been an integral part of video games. However, these mechanisms are often invisible to the user. In the case of computer-human match-up, the performance level of AI needs to be adjusted so that the human side feels fairness.

The technology of AI will transform the way we work, enabling faster, more informed decisions, increasing operational efficiency, and innovating new products and services.

III

Today AI is progressing rapidly and its applications are expanding widely from self-driving cars to chess-playing computers to Siri. AI today is precisely known as narrow AI or weak AI, where it is designed to perform specific work, like only speech recognition, or only internet searches, or only driving cars. However, the long-term goal of many researches is to create general AI (AGI) or strong AI. General AI can outperform humans in almost all cognitive task, whereas narrow AI would outperform humans in only specific tasks, like solving equations or detecting language.

In the short term, the goal of keeping the influence of AI beneficial to society promotes research in many areas, from economics and law, technical topics such as verification, validity, security, and control. Another short-term challenge is to prevent catastrophic arms race by autonomous robot weapons. In the long term, the key issue is what happens if humans succeed in creating a strong AI and the AI system outperforms humans with all cognitive tasks. As I. J. Good pointed out in 1965, designing a more intelligent AI system itself is a cognitive task. Such systems may potentially repeat self improvement and trigger an explosive intellectual development, leaving human intelligence far behind. By inventing revolutionary new technology, we may be able to use superintelligence that can eradicate war, diseases and poverty. The creation of strong AI might be the biggest event in human history, however, some experts have concerns that AI might become the end of human beings unless humans learn to align the AI's goals with our goals before it becomes superintelligent. Some people question if strong AI will ever be achieved, while others insist that creating superintelligent AI is guaranteed to be beneficial. Not only these two possibilities, but also the potential for an AI system to intentionally or unintentionally cause great harm to us needs to be recognized. Many researches of AI are being carried out today to better prepare for and prevent negative future consequences, enjoy the benefits of AI and avoid danger.

The issue of AI is suddenly being noticed. Big names in many science and technology fields including Stephen Hawking, Elon Musk, Steve Wozniak and Bill Gates have recently expressed concerns about the risks posed

by AI, and many leading AI researchers agree with them. The idea that the quest for strong AI would eventually succeed was thought to be centuries or more away. However, due to recent breakthroughs, many AI milestones that experts thought to be done decades away just five years ago, are now being achieved, and many experts are seriously considering the possibility that superintelligence will be born in our lifetime. Some experts still speculate that human-level AI is centuries away, but most AI experts who took part in the 2015 Puerto Rico Conference guessed that it will be developed before 2060. It is considered to be prudent to start the study now since it may take several decades to complete the required safety research.

It is agreed by most researchers that intelligent AIs do not show human emotions as love or hatred, and it is unlikely that AI intentionally becomes benevolent or malevolent. Instead, experts think that the possibility of the following two scenarios is highest when considering how AI can be dangerous. The first one is that AI is programmed to do something devastating. Autonomous weapons are AI systems that are programmed for the purpose of killing. If it is put in the hand of the wrong person, these weapons can easily cause mass casualties. Besides, the arms race of AI may unintentionally lead to a war of AI where it also results in large number of casualties. To avoid obstruction from the enemy, these weapons will be designed to be extremely difficult to turn off the power, and it has high possibility that humans would lose control of such situations. This risk is also present with narrow AI, but the risk increases as the intelligence and autonomy of AI increases. The second is that the although AI is programmed to do something beneficial, it develops a devastating way to achieve its goal. This is a scenario that can happen if our goal is not perfectly aligned with the goal of AI, which is very difficult to prevent. Once an obedient and intelligent AI system is given an order, it will literally recognize the request whatever the situation is. If a super intelligent system is tasked with an ambitious global engineering project, it might cause a great disorder of the ecosystem as a side effect, and human attempts to stop it may be seen as a threat. As these examples show, concerns about advanced AI are not malice but capability issues. A super intelligent AI has great ability to achieve its goals, however it is a problem for humans if those goals are not consistent with ours. A key goal of AI safety research is to never place humanity in the position where will be attacked by AI competence.

Because AI has the potential to exceed and human beings by intelligence, humans don't have any reliable way to predict how AI will behave. Past technological development cannot be used as a foundation because people have never created something that has the ability to outsmart humans, either intentionally or unconsciously. Some say that as long as humans win the race between the growth of technology and the wisdom of managing it, our civilization will flourish. The best way to win that race is to accelerate the latter by supporting AI safety research rather than interfering with the former.

IV

A fascinating conversation is taking place about the future of AI and what it will or should mean to humanity. There is also an attractive controversy in which opinions are divided among some of the world's leading experts, for example, the future impact of AI on the job market, whether or when human-level AI will be developed, if so, if it will lead to an explosive intellectual development, and whether we should welcome or be afraid of.

AI is believed to have massive implications in more areas and will be an extremely relevant topic in the human scientific and intellectual realm someday. It is very important as it may someday affect the face of society completely by influencing job scenes and theoretically endless other areas. The development of AI has risen dramatically in the past 10 years and it is becoming more prominent today than ever. As this technology gets more sophisticated, completed, and applied in more fields, its impact will be dramatic for human beings, and humans will be replaced by machines in some ways.

Among all the possible ways AI can change our society, the most dramatic one is how it will affect the job scene. In theory, AIs and robots can replace almost any work humans can do. Robots can be simply programmed to do a simple job that currently use human workforce, and AI can execute somewhat advanced task that requires more than a simple direct input. More people are feeling that their ability to make a living will be threatened by AI in the near future, however this all depends on the kind of job and the duration. The relative job stability of older generations is due in part to the senior positions they hold within their company. After all, it is easier to replace someone at the beginning of their career than to replace the entire department of management and leadership established. In the meantime, only low-level, repetitive tasks will be automated, and those that do more subtle and difficult tasks are likely to be safe. This means that people with developed and adaptable problem solving and decision-making skills can eliminate themselves from the immediate threat of replacement, and work with AI in a more advanced position in the long term.

If machines and robots will be able to execute cognitive functions that were once difficult to automate, there will be very few jobs that are safe. Theorists have proposed universal basic income as a solution so that the government provides living wages to combat the inability to secure employment for their citizens. This is a scary proposal and

may cause a rebellion from the general public on the problem of moving forward with this movement from manned work to automated labor.

However, this may not actually be such a bad thing when listening to the other side. As a result of examining 1,000 companies, it became clear that the AI systems created new employment in 80% of the organizations where the AI system was introduced. In fact, a 2017 report by Gartner predicted that AI creates 2.3 million jobs while eliminating 1.8 million by 2020, creating more diverse workforce of creative and high-skilled individuals, and net profit of more than 500,000 jobs.

As the global economy promotes the widespread adoption of AI solutions, competition will grow fierce due to the lack of skills that are necessary to implement, manage, and work on this new technology. Therefore, developing these skills is essential for all young experts who want to protect the safety of their work in an increasingly automated workplace, and as this skilled workforce advances the AI industry at an accelerating pace, the demand for more highly trained experts will increase accordingly. This will result in a workplace composed of adaptable people, whose jobs are reconsidered, enriched and promoted by the technology they work with. Many low-skill tasks will be replaced by sophisticated automation that AI enables, but new carriers and industries that have not yet been invented will emerge.

We can not understand the work that AI will create in the meantime, since AI has just begun and has not reached the stage of hiring a lot yet. It is difficult to predict how much it will redefine the position of professionals in the workplace. One thing that can be said is that we must pay attention to the warning signs, take initiative, and equip ourselves with the skills needed to survive this potentially turbulent economic evolution.

V

In conclusion, with the increase in the implementation of artificial intelligence in everyday life within the next 5 to 10 years, it can be said with confidence that modern society seems to be quite different from present. This change probably will not happen in the same apocalyptic way as some people fear it may, but better or worse, it will still be a dramatic change. As the field of AI expands and improves, more applications will be born and more parts of how our society is currently working will be affected. If these guesses and estimates are correct, the world economy and the workplace will change dramatically, and millions of works around the world that had been done by human workers may be replaced by robots and AI. The advent of AI's new uses will create new jobs that may not exist even today, and for that we will need a more skilled and effective labor force. As most of the simple tasks are handed over to the robot, new opportunities will be opened to humans. It will be interesting to see what changes will occur over the years and what progress will happen earlier or later than we imagine.

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Fast Food and Food Waste

Megu Kimura

With the world's population predicted to reach 9.6 billion by 2050, people need to think how we are going to deal with the increasing population and limited food sources. According to the United Nations, to provide enough food for everyone, what we need to do is not to produce more food, but to prevent wasting food. According to Food and Agriculture Organization, each year up to one third of all food, which is approximately 1.3 billion tons of food, is spoiled or squandered before it is consumed by people. Most of the food waste occurs in the developed countries. Actually, Europe and North America waste food around 95 to 115 kilograms per year, compared to just 6 to 11 kilograms in sub-Saharan Africa and South and South-East Asia. Food waste has a significant influence to the environment. The carbon footprint of wasted food is estimated at 3.3 gigatonnes. In addition, researchers at the University of Arizona studied the food waste generated by fast food restaurants and compared this waste to the levels found at regular dining style restaurants. According to their research, fast food restaurants on average, wasted about 9.55% of the food. However, regular type dining restaurants wasted only about 3.11% of the food. It is said in 2013 by the Statistic Brain, that the average fast food restaurant generated 200,000 pounds of food waste per year. Moreover, the End Food Waste website reports that the top fast food consuming country, America, the fast food restaurants there waste over 85 million pounds of food each day. Therefore, in this essay, first I will compare the 3 top fast food restaurants in America in order to see where and how the large quantity of food waste is created, following by, showing the 3 main causes of why the massive amount of food waste is coming from fast food restaurants, in order to seek the sources of the issue to come up with possible solutions, and Lastly suggest the effective solutions to reduce the food waste and contribute to decrease the hunger rate.

I

To begin with, I will explain three top fast food restaurants in the world, Subway, McDonald's, and Starbucks, considering about its food waste. Firstly, Subway, an American chain of fast food restaurant franchise, is the largest and the fastest growing restaurant chain in the world. It is privately held, owned, and operated by Doctors Associates Inc. and has 44,882 restaurants in 112 countries and territories at this time in 2017. Subway fast food restaurant in the United States has about 26,646 outlets, and is also the largest operator in the world. It mainly sells sub sandwiches and salads, so it is generally considered to be one of the healthier choices when it comes to fast food. It sells salad for \$5 to \$7.50 and sandwich for \$3.75 to \$4.75 for the 6-inch-long size and \$5.50 to \$8.95 for the footlong size. Considering about its food waste, it is trying to reduce its waste stream with a goal of having as close to zero landfill waste as possible, such as optimizing how its products are packaged to reduce waste streams for breads, meats, cheeses, sauces, used in its restaurants. However, it still has a large amount of waste from its consumers who discard its food from subway. Secondaly, McDonald's is an American hamburger and fast food restaurant chain, and is the second largest restaurant chain in the world, which are up to 36,525 restaurants in 119 countries with approximately 36,615 outlets. The company was founded in 1940 by two brothers, Richard McDonald and Maurice McDonald. The menu has been changing and now it mainly sells chicken products, hamburgers, breakfast items and french fries with cheap prices. They sell chicken nuggets less than \$5 for 10 pieces, 2 cheeseburgers for \$2 breakfast meals for less than \$5 and french fries for less than \$2. In addition, the company has recently expanded its menu to include fruits, fish, smoothies, salads and wrap and the number of new restaurants are increasing everyday. McDonald's is popular for its low price and high calorie meals and it feeds 68 million people every day. However, its food waste are between 4% to 10% of food before it reaches the consumer and 17% of food is left uneaten by diners in restaurants. Approximately 6.5 million burgers are sold every day and 1% to 3% of meat is wasted before it was sold, so around 50,000 to 200,000 could have been hamburgers per day that it had not been served. They have carried out proper disposal waste programs to manage the food waste once the McDonald's cannot reduce, reuse and recycle the waste in 2008, and also McDonald's in UK had a trial tested out an alternative method of disposal in 2010, which by converting the food waste to energy. On the other hand, it still has a large amount of food waste everyday and has been influencing negatively to the environment. Lastly, Starbucks is ranked 3rd top fast food restaurants in the world. Starbucks is an American coffee house chain, which was founded in 1971 in Seattle, Washington. The number of locations is up to 23,768 in more than 60 countries and is the 3rd largest fast food restaurant chains in the world, followed by KFC with 19,420 restaurants, and Burger King with more than 15,000 restaurants. Primarily, it serves espresso, whole-bean coffee, fresh juices, cafe latte, Frappuccinos, La Boulange pastries and full-loose leaf teas. It has 4 sizes, tall, grande, venti and Trenta, which are small, medium, large and extra large. The prices are comparatively higher for a coffee at other fast food restaurants but it is trendy today and has a perception of providing quality coffee products. A new plan by Starbucks to end food waste at its United States locations by donating all unused food to the needy are not yet spreading but similar initiatives already exist on a local level and may be a part of a broader trend

in the restaurant industry. Even though, the stated goal of Starbucks program is to eventually "rescue 100% of its food available for donation", Sylvain Chralebois, a professor at the University of Guelph's Food Institute, points out that the plan does not address the core Starbucks product, which is coffee. It is hard to say it is doing well for reducing food waste.

II

Next, I will write the 3 main causes of food waste in fast food restaurants, which are the low price, poor recycling habits along with the supply chain inefficiencies, and the lack of attention of food waste from people. Firstly, its cheap price is one of the biggest causes of this. Most fast food restaurants sell their food in low prices, and this leads to anyone in all economic classes easier to go there, and people tend to not care about wasting food and money they spent on fast food, so it increases the food waste. Considering about the people in the poor class, it is necessary for them to spend as less money as they can so they are likely to go to fast food restaurants which makes them full with little amount of money. However, even people in the higher classes are likely to go to fast food restaurants because it serves food very quickly and they don't have to waste time. In addition, for them, they might want to spend as less money as they could for the food so that they can spend money in other things. In fact, according to the Pew Research Center in 2013, there were 160,000 fast food restaurants in America, and fast food restaurants in America served 50 million Americans each day. It was also found that 44% of Americans visit a fast food restaurant once per week. So the low price of fast food restaurants make a lot of people from various classes go there, and because it is cheap, they care less about wasting food and the money they spent for that. Secondly, although recently people are trying to recycle things more often, the recycling habits are still poor, and the inefficiencies of the supply chain largely contributes to food waste. In diners, about 17% of the food is left uneaten on average, and one of the biggest reasons for this is portion control. Restaurants everywhere, including fast food services, have allowed portions to balloon in the past 30 years. Furthermore, fast food restaurants also keep more food than they need on hand to make sure everything on their menu is available. Another one of the biggest problems that many are in dispute about is that chain restaurants have set rules and guidelines that require perfectly good food to be tossed out. For instance, McDonald's requires fries to be thrown out if they are not given to the consumer within 7 minutes. According to Plumer in 2012, About 1/10 of the fast food got junked this way in the United States. Fast food restaurants also have "fresh food" guidelines, for example a restaurant may have a limit of 15 minutes for "holding" cooked food, such as hamburgers. They make about as many as they expect to need in that time period, and then whatever they don't end up using gets tossed. So this inefficiencies and guidelines are also big causes of food waste in fast food restaurants. Another big cause of the large food waste that the fast food restaurants make is the lack of attention of the society and each of the people in the world and each of the people in the world. Because of the high-speed nature of fast food restaurants, both employees and customers pay little to no attention to the waste they generate in the process of serving and consuming the food. In addition, unfortunately, there are no federal laws or regulations currently in place in the United States specifically aimed at reducing food waste in Fast Food restaurants which can be said that the society does not have much attention in reducing the food waste. Moreover, the lack of education about the food waste and how the fast food is served is also one big cause, and is another evidence that the society has low attention to food waste. Most people do not know the process of fast food, and people should know how the food they eat is processed so that more people will care about what will happen when food are discarded and notice that it is affecting largely to the environment and society.

III

In regards to its solutions, the 3 most significant solutions to reduce the food waste in fast food restaurants are the use of a BioBin, switching to composting food waste and packaging and governmental intervention. As one of the biggest causes of the food waste that I mentioned before was the poor recycling habits, an easy solution would be the use of a BioBin, a dumpster that uses organic enzymes to break down food waste. Specific to recycling food, the materials needed to compost and break down leftover food has been found by individuals to be disruptive of the environment. Many complain that the food processing plants create loud noises, odors, and unappealing aesthetics. Additionally, these digestion plants require large amounts of space. Most fast food restaurants are located in big cities because of the fast-paced nature of the people living in them, which limits the land and space to create such facilities. And, this BioBin would be a solution for this. BioBin come in various sizes, and do not take up much space. Fast food restaurants can leave the BioBin behind their restaurants, where a dumpster would be. This would also mitigate complaints that recycling requires too much effort. The patented Biobin aeration system allows for composting of organic materials while simultaneously minimizing odors, decreasing waste collection costs, and reducing greenhouse gas emission. The compost that is collected inside the Biobin is collected to be of use at an organic recycling facility. The facility will process the waste into compost and mulch products to be used to growing agriculture. The Biobin

only needs to be emptied when it is full and can hold as much as 5,000 kg of waste. Biobin is a very effective solution for the food waste in fast food restaurants. To encourage fast food restaurants to change their rules, such as switching to composting food waste and packaging, would also decrease food waste and help customers compost as well. When food is recycled into compost, this compost can help improve soil health, increase drought resistance, and reduce the need for supplemental water, fertilizers, and pesticides. Most importantly, food waste can also be turned into renewable energy through anaerobic digestion. As the massive food waste is coming from the fast restaurants, it is necessary for them to take action and try to solve the negative effects that is occurring from its food waste. This solution would be effective while considering about the environmental point of view to the world. Lastly, although there are many groups that could help reduce food waste, such as businesses, consumers, charities and so on, the government would be the most influential group thus it would be best to lobby to make fast food practices more sustainable and would be able to make the industry go green. Some potential options were to regulate food waste audits, food ingredients and set incremental targets over time to maximize food waste diversion. The benefits to gain from governmental intervention are increased health, less spending and most importantly decreased pollution, making the earth more sustainable. Government is the best way to spread facts about this issue and could lead to gain more attention to the fact of the massive food waste from fast food restaurants, while considering about the lack of attention from the world about food waste, which was one of the biggest causes of the large food waste that I mentioned before.

IV

In conclusion, firstly by comparing the 3 top fast food restaurants, Subway, McDonald's and Starbucks, it can be said that all three of them had some methods to reduce its food waste when it produces. However, they all still had huge waste of food before it delivers to consumers and also from its consumers and its plans for mitigating the amount of food waste was not much effective. Therefore, it can be inferred that reconsiderations of the policies in these 3 biggest fast food restaurants will contribute widely to saving the food from being wasted and will enable more people to access to food. In regards to the causes, although there could possible be more things that has been causing the food waste, I believe that the 3 main causes I mentioned, which were the low price, poor recycling habits along with the supply chain inefficiencies, and the lack of attention of food wastes were a large part of the cause. Finally, I also feel that the 3 solutions I suggested, which were the use of a BioBin, switching to composting food waste and packaging and governmental intervention would definitely lead to decrease the waste of food if these solutions could actually be done. As the population has been increasing, food cycle would have to be more efficient in order to decrease hunger and pollution. I believe that keeping on people's mind that, the fast food restaurants actually have large food waste and are influencing the world largely, is very important and would have to think seriously these solutions to this issue.

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How Microfinance in the Countryside Can Be Used for Decreasing Poverty

Chie Mizuguchi

Microfinance is one of the effective methods to contribute to reducing poverty. Microfinance is financial services for people who cannot borrow money from a normal bank or financial institution because of being poor or low-income. It makes these people be able to start their own business that has potential to improve their lives by institution lending small amount of money to start. This contribute to have jobs medium or long-term and get rid of poverty. In fact, the household surveys funded by the World Bank carried out by the Bangladesh Institute of Development Study show that microcredit lifts 5% of borrowers from poverty. According to the reports of development study, the 80% of residents in rural area work for agricultural business and they want to use financial supports. Therefore, most of people use microfinance to start cropping, but some of them still cannot use it or are in struggle. Moreover, there are many farmers who are suffer from poverty and using microfinance to get rid of poverty. However, many farmers cannot get service of microfinance because they cannot use or have asset as security to receive credit. It is very important to get financial service for farmers in order to make the cropping effective and expand profits which could be trigger to get rid of poverty. In the first sector of the thesis, I will look at advantages and disadvantages of using microfinance to get rid of poverty, to evaluate how microfinance can contribute to declining poverty. In the second sector, I would like to look at three problems of microfinance in agriculture in order to find out what problem has the biggest and worst influence on people to get rid of poverty. Also, microfinance for agriculture is mainly in rural area, so I will look at problem of microfinance in rural area. Then in the third sector, I would like to focus on how can they achieve to have security to get service of microfinance in order to find out how microfinances can help more for problem of poverty.

I

First, I am going to look at the strengths of carrying out microfinance. One main strengths of microfinance could be that it is sustainable process for development. The business can be launched with small amount of capital in developing countries. For example, only \$100 can play a very valuable role to leave poverty and develop economic growth. It is much more efficient usage of money than large amounts. If there is a defaulted borrower have to repay with high interest rate. That repayment rates are used investment for other business without profit of the organisation. It can improve the local economy more and decline poverty. Next, microfinance has educational opportunities. The entrepreneurs can get the knowledge and enterprising potential. That contribute to success of business, following that declining poverty trap that led low income, poor nutrition, low productivity, lack of education, low skills and poor job prospects. It means their children have more likelihood of going to school enough because the household can have income margin to send its children to school. Therefore, the fate of poverty that is passed on the next generation can be broken by microfinance. Consequently, it makes employment opportunity. The survey by concludes microcredit create average employment for 1.5 persons from an enterprise. The 30% of employer word part timely and the 90% have been getting full time employment in different business sector. It creates economic impact that promote increase income which also increase consuming in the local community. Lastly, it can help to solve gender equality. The 97% of borrowers are women. Microfinance aimed at people who cannot have access to formal financial intermediaries such as banks. It can empower women who always work in the household and do not have the same rights as men due to religious reason. Once women start managing their households using microfinance, they start to have more self-esteem and self-confidence in both household and wider community. Finally, women can have more choices and rights in their families and communities.

Next, I am going to look at the limitations of microfinance. One of the biggest disadvantages is that there is heavy pressure to repay and borrower suffer from repaying. When borrowers could not repay the loan, some of them were driven to sell their organs to repay. It mostly occurs in small villages where the people do not have enough knowledge about importance of organs. Some of them loan from several institutions to repay another institution, so they have heavy pressure that they have to sell organs, such as their kidney. If they do traffic their organs, they become physically weaker and they become not to be able to work harder physically than before. Moreover, some other choose to take their lives rather than facing microfinance agent. More than 80 people died due to the pressure of repaying their loans in 2010, in Andhra Pradesh. Another big problem is the existence of dishonest agents. Some agents exploit profit from poor borrowers. The money lenders become rich through being 'loan sharks', which means the lender seek profits on the loan by changing from non-profit organisation to commercial enterprise. And also, some of these money lending companies don't check whether borrowers have abilities to reply the loan. Statistics state that the 60% of income of microfinance borrowers in India were spent on repaying loans although the source of income is unstable and uncertain, according to the government. Another common limitation is that particular supports are needed for microfinance. If there are not governmental and international supports, microfinance institution has to charge high

interest rate on the loan. When Grameen Bank had lost support from government, they was forced to re-launch itself and charge 40-50 % although their average rate is 20%. Moreover, it is carried out in developing countries. It is one reason of difficulty of microfinance because developing countries do not have enough function to support it. It also causes difficulty of running business such as power cuts and delivery breakdowns. Consequently, lack of education and knowledge have bad impact on running business. Borrowers who are poor and cannot have ability to borrow from common bank may did not have done enough education. It leads to mistaken methods to running business. The large percentage has failed to generate the income and be successful in long-term due to lack of experience and knowledge. Sometimes, most of the money loaned is used to fulfil daily needs or luxury goods rather than for business investments.

II

One of the biggest problem of microfinance in rural area is that the renters don't have sufficient security. As you know, the most of the residents is farmer and generally their assets are land, according to the reports of development study. However, many farmers who live in rural area don't have enough land to use as security, especially people who are in poverty, because most of them lent land to farm from wealthy people. Even if they have land, the land may be too small to use as security or may lack certification that prove who have the land. Therefore, they are difficult to access to financial service.

Other problem of microfinance in rural could be difficulty of risk management of agricultural businesses. Managing towards risk of farming is very complicated because the agricultural business has various types of risk. For example, they have risks in cropping such as weather condition, disease. Also, they have marketing risk, financing risk, legal & environmental risk and human resourcing risk to start farming. Farmer need to care for not only cropping, also administer their asset to credit, diversify income for stable life and arrange informal insurance for absence of insurance markets. Moreover, agricultural business likely to take longer-term to return the money. Thus, to cope with the all correlated risks perfectly is so difficult in agricultural business. The complicated risks make them difficult to manage plans of payback.

Another problem of agricultural microfinance in rural area can be that liquid management is needed by microfinance institution for the economy of rural area. According to the account of rural finance of expert, some economist stated that institution need to manage liquidity. Liquidity means the availability of liquid assets to a market or company. That impacts on prosperity or depression. In rural area, there are undiversified economy which means economy rely on agricultural business. That makes the economy difficult to overcome risks because risks are generally decreased by investing wider range of jobs, although the opportunities of investment in rural area is significantly limited. Thereby the lender is likely to remain larger amount of liquid assets than usual, and that cause depression which make worst impacts on the economy. Therefore, even if it is microfinance institution, they need to care about business condition by using other way such as parking the excess liquidity in other place such as government bonds and securities.

III

One of the biggest solution can be to widen a range of usable asset so as to extent the possibility of having security. If the regulation of usable security is changed farmer can use other asset as security for microfinance. If movable assets become possible to use as security more people likely to be able to have security. Movable assets include solidarity group, documents called promissory note, gold and livestock. Those have some ethical limitations as well as advantage and some of them is not acceptable in some region. However, this could increase possibility to start microfinance.

In order to utilise correct security, titling land legally would also be good solution. Hari Pathak, a professor, stated that farmers need to title their land to prove legally correct in order to use as security. Most of poor farmers use land which is government owned or common land for cropping with others. It means the clients can't hold title of the land officially. In this case, they cannot use land as security although the land has enough value to be security. Therefore, it is needed to have process of officialising their land.

Third possible solution could be using solidarity group to use as security for people who have no longer asset. This method uses one or two personal guarantors and make solidarity groups of four or five poor people. The members share the responsibility of payment and loan within the group. In fact, they have very high lone returning rate of about 97 percent and they success the business as well. This number is higher than in ordinary banks, which include wealthy borrowers. If this way can be usable they can lend credit from institution even if they don't have any assets.

IV

In conclusion, microfinance can be a good method to get rid of poverty although there are several benefits and criticisms. However, whether they can get rid of poverty or not would depend on how the situation in which

microfinance goes on and how organisations and people use it wisely. In order to use it productively, I believe that the governments need to supervise relevant rules globally and also locally. One things that government should supervise could be changing the system of titling land. Lots of famers were struggle with the lack of enough security and I believe that this has biggest impacts on starting on microfinance service. If the government change the law of title, lots of famers will be able to start on microfinance service because the most of farmers have land for their work and it likely to bigger than other people and their land can be proven as sufficient security. Therefore, I believe that the governments must control microfinances to establish proper circumstance in which people can get the opportunity to start microfinance and get rid of perpetual poverty.

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The Relationship between Mangroves and Shrimp Farming

Haruka Daiku

There is a strong relationship between mangroves and shrimp farming. According to Ministry of Agriculture, Japan is the biggest consumer of shrimp in the world. In addition, the amount of shrimp consumed in Japan per family is about 1.3 kg a year. And 90% of shrimp in Japan is imported from some countries. In this essay, I will talk about the mangroves and shrimp farming. In addition, I will talk about how shrimp farming relates to mangroves in order to explain the environmental impact.

I

First of all, the present condition of mangroves in Vietnam is very important to understand. Mangroves are any tropical tree or shrub of the genus rhizophora, the species of which are mostly low hanging trees that grow in marshes or tidal shores, noted for their interlacing above ground roots. Mangroves thrive in tropical areas, such as Southeast Asia. Mangroves have important roles in the environment, especially for the world's oceans. However, there is a problem that relates to the current ecosystems of mangroves. According to the FAO, in 1980, the number of mangroves in the world was about 18.8 million ha, but in 2005, the number of mangroves decreased to 15.2 million ha. The world has lost at least 20% of its mangroves.

Vietnam has the most shrimp farming in the world. Shrimp production is a growing agricultural commodity. According to FAO, the total yield in the world of shrimp was 787 tonnes in 2013. Out of that number, the number of shrimp that were farmed was about 445 tonnes. Vietnamese farmers can produce a large supply of shrimp in a small area, but there are risks. If one shrimp gets sick, its sickness will spread in close proximity, so there is a high probability that all shrimps could die. In fact, in 1997, there were four mass fatalities of shrimp that spread from a single farmer. This caused serious financial blows to many farmers.

Recently, mangroves have been declining because of shrimp farming. According to ISME (International Society for Mangrove Ecosystem), "The biggest cause that mangroves are declining is shrimp farming." One of the reasons is because shrimp farmers select areas near the sea and warm temperatures. Shrimp require an average of temperature of more than 20 °C per year, which happens to be the ecosystems of mangroves. Because there are not many owners of the mangroves, the shrimp farmers cut the mangroves down and use those areas for agriculture. They also cut mangroves for wood materials for constructing houses or factories.

II

Mangroves are vital to the world's ecosystems. They house and protect aquatic creatures and protect people from natural disasters such as tsunamis. Mangroves have a root that is like maze, so it is good for creatures to lay offspring because it is good for creatures to protect their offspring from predators. If mangroves keep decreasing, the surrounding ecosystems will significantly deteriorate. Mangroves are protecting not only aquatic creatures but also people. When natural disasters happen, mangroves function as dikes. The tropical areas that mangroves thrive in do not have dikes because mangroves are the alternative of dikes. In fact, in 2008, a huge typhoon struck Myanmar. In this disaster, 138,000 people died because Myanmar did not have enough mangroves to protect the surrounding coastlines. A biologist from Myanmar said, "If there are mangroves, the damage that occurred by this disaster might have been smaller."

Mangroves also have the ability of cleaning air and water quality. Mangroves are able to absorb carbon within the wood, a natural phenomenon known as carbon sequestration. All plants are able to absorb carbon, but mangroves can absorb much higher rates of carbon than other plants. Therefore, mangroves are doing photosynthesis actively than other plants. When people cut the mangroves down, massive amounts of carbon release into the atmosphere. This increases global warming at an alarming rate, so mangroves are able to protect the earth from global warming if they are allowed to do what they naturally do. The Sustainable Development Goal 14, which strives to balance the ocean biome, might not achieve by 2030 if mangroves are continually destroyed. Mangroves are a very important role in the global environment.

On the other hand, mangroves are also comprised into invasive species. Mangroves are living in only particular areas such as tropical zones, and because of their dominance, if mangroves are an introduced element, they might take over other native plants and ecosystems. Mangroves can only thrive in areas with tropical climate and can be an invasive species in a foreign environment. If people plant mangroves in the right climate but in areas that are not native to mangroves, mangroves will take nutrients from the soil and from other plants and drastically change the local ecosystem. This action might break native ecosystems. In fact, in 2008, Nigeria imported mangroves from Singapore. Mangroves wiped out the native plants called nipa. Mangroves can protect ecosystem in particular areas,

but also can break other ecosystems. Proper management is essential for selecting the areas of planting mangroves and avoiding destruction of native habitats.

III

Shrimp farming in Vietnam must become more ecologically beneficial with the surrounding environment. Many shrimp farmers in Vietnam destroy mangroves in order to make their property more suitable for shrimp farming. This action is bad for the environment and needs to be changed. The best way to do shrimp farming would be to make the place of shrimp farming inland. Mangroves should be government owned land because mangroves should not have private owners. Governments are more permanent and better managers of nature than private business owners mainly because governments have more authority with laws and do not change ownership. Inland farming should be entirely privatized. Farmers should make their own customized ponds that pump ocean water inland. The previous people who were employed to cut mangroves should be given subsidized money to start their own farms inland. All farmers should begin their initial investments with preferential treatment of the government. In addition, the shrimp farmers should make an association with other farmers in order to control the market pricing of shrimp. If the Vietnamese government compensates the initial costs of production, especially building the ponds, it will create an economic boom in agriculture and lead to a more sustainable agriculture system in the future.

In my group's business proposal regarding SDG 14, we decided that branding a quality product is essential in order to create a market presence for shrimp production. We made a logo called the "Mangrove Smile Mark" This mark is to show consumers about the current condition of mangroves and the promise of an environmentally friendly food product. Many people do not know the current condition of mangroves. It would be a good public relations campaign to show the world about this issue and ensure to consumers how they can eat safe products that did not harm the environment. It is difficult to prevent the destruction of mangroves without public support; therefore, a trademark will give the public better insight on the current condition of mangroves. This trademark would be put only on certified eco-friendly shrimp commodities. Making this environmental problem a marketable commodity, it will give recognition of mangroves and consumers will have a sense of buying natural shrimp commodities that do not harm mangroves. The profitability of such commodities will increase as long as there is customer loyalty to the product and its ideals. Vietnamese farmers could spread the "Mangrove Smile Mark" using Newspapers, Posters, Websites, Youtube, and various social media.

Once the government fully controls the mangrove regions, they can begin to replant damaged areas where mangroves once played crucial roles in the environment. Okinawa has already began replanting mangroves along its coastlines. This action is to clean the environment and prevent tsunami damage to populated areas. Mangroves acquire salt water to develop and grow. In addition, mangroves extend shorelines, so mangroves can build up land. According to FAO, the lowest cost to plant mangroves was about USD \$225/ha in 1997 (the rate of USD in 1997 was same as about 130 yen, so it is same as about 30,000 yen). Currently, it is not much more expensive to plant mangroves. It is a feasible and cost-effective investment for the environment and safety of populated areas.

IV

In conclusion, the destruction of mangroves is an environmental crisis, and modern human interventions such as shrimp farming or land development do not need to be causes of this destruction. The Chairperson of the Ministry of Agriculture Forestry and Fisheries (MAFF) claimed that habitat destruction of mangroves is a serious problem. The only mangroves in Japan are in Okinawa. On the other hand, shrimp is a common food product in Japanese cuisine. Therefore, I want Japanese people to know about the impact on the environment caused by shrimp production. If the mangroves continue decreasing rapidly, global warming will increase exponentially. This is a part of SDG 14 that is about keeping water quality, so if mangroves continue decreasing, this goal will not be achieved because mangroves have an important role in the environment to purify ocean water.

Mangroves can be an invasive species if mismanaged in new ecosystems, but they have more benefits for the environment and people. Even though mangroves have the potential of disrupting native ecosystems, if people plant mangroves properly following the best design principles and proactive management, mangroves can be integrated to make life systems flourish. There are many people who cut mangroves without knowledge of the environmental consequences or protection of natural disasters. People must stop clearing mangroves. The consequences for destroying mangroves in their native environments are too damaging for humans and the biosphere.

Humans have the power to protect mangroves. The easiest way of protecting mangroves is to change the way of how farmlands operate near coastlines. Farmers need to operate inland and away from mangroves. Governments need to own and control the areas comprised of mangroves. Shrimp farming in Vietnam is an easy example to explain the issue of the decreasing mangroves, but it is also going to a lot of time to have people to know about this project. Making products that are advertise being environmentally friendly is one way to build awareness and public

relations. On the other hand, we also need to replant mangroves where areas have been depleted. It is easy to get participation of volunteer groups to help the environment. This action would be able to incorporate the volunteer ethos. The volunteer requirements for getting a job or an entering a university are becoming widespread, so the probability of participation with students could drastically increase. Therefore, to replant mangroves is the easiest way to get the public involved in preserving and protecting mangroves. The protection of mangroves needs cooperation of people. The deadline of SDG 14 is 2030, and there is still time for it to succeed. Education and action is the key for the survival of the world's mangroves.

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Aquaculture in Vietnam Marin Yamauchi

There are a lot of countries in the world and these countries have different conditions in terms of the environment, economic, and so on. In this situation, people use many ways of aquaculture in each different place for getting more profits. Vietnam has cage and fence aquaculture in marine, rice-cum-fish, mangrove-cum-fish, using pond (fresh water), and using brackish water. Which way people use depends on the part of Vietnam. The landform of Vietnam is long like Japan so there is little difference by place. In the Northern region, people focus on the pond, marine cage culture, and rice-cum-fish. Central region concentrates on marine cage culture. People who live in the southern region have most diversified farming activities such as pond, fence and cage culture, rice-cum-fish and mangrove-cum-fish. People tend to use a new method if it has given big profit once. Aquaculture is one of the ways to give big influences to people like improving their income. However, these influences are not only good things but also aquaculture has a lot of difficulties. When people started aquaculture, there were not unsolvable problems but they tried to make profits as much as they can with new ways, therefore it brought difficulties. People have got to solve difficulties which aquaculture has with using many ways such as precious experiences, researching, and new ideas. This result brings aquaculture more effectively. There is the possibility to have huge profit from aquaculture and it depends on how people act on issues. In this essay, I will explain three ways of aquaculture in Vietnam which are using marine and brackish water(include fence and cage), pond (fresh water), and lowland rice fish, to determine how each type of aquaculture has its own role to play in Vietnam, advantages, and disadvantages of aquaculture in Vietnam to determine how aquaculture influences profits, and three solutions for disadvantages of aquaculture that are connected to human, place, and products (fish or crab) in Vietnam to determine which solution is the most useful.

I

The most useful way of aquaculture is using marine and brackish water. The largest area that is used for aquaculture in three different water uses (brackish, fresh, marine) is brackish water. According to Aquaculture Vietnam 2017, brackish water surface area is 492.4 ha and it is 46.6 % of the total area. 2.3% of the area is for fish products, 42% is for shrimp and 2.3% of the area for mixed & other aqua products. Brackish water has more saline than freshwater but it is not the same as seawater. The salinity of brackish water is 0.05% to 3.5% and seawater is 3.5 or more. Also, brackish water is middle of freshwater and seawater. Marine aquaculture occupies 23.9% of the total area with 252.7 ha. Almost all products are shrimp, and it is 20.6% of all marine area. In these areas, people use mono and polyculture. The mono is when just one kind of fish is farmed in the same cage. Polyculture is where different kinds of crab, shrimp, and fish are farmed in the same cage. Most Vietnamese do polyculture, because even if one kind may get sick and die out the other kinds survive. If we focus on export, marine aquaculture improves and Vietnam has been among the top 10 marine aquaculture countries since 2012. The general department of fisheries said marine fish output had gone up to 28,300 metric tons in 2011 from 15,700t in 2010.

Another kind of aquaculture is that people use the pond area. Area of the freshwater surface is the second position and this area occupies 29.1% of the total area with 307.8 ha. People produce fish more than other products. In some areas, people raise frog with fish for high economic efficiency, sustainable development and reducing environmental pollution. Almost all people raise tilapia and catfish because these fish eat frog feces. It means water can be kept clean and they also don't need to feed the fish as much as when they raise fish alone in the pond.

In Vietnam, not only aquaculture but also agriculture is one of the good ways to make profits and rice is the biggest products. People do aquaculture using rice agriculture. After rice harvest, people use the same place to raise fish. Rice is the primary crop and fish culture is secondary or complementary. This way was introduced into South-East Asia from India about 1500 years ago and a lot of people using now. According to Schuster, it is contemporaneous production of grain and animal protein in the same area of land and is one of the good methods to use land efficiency. Also, there is the time that they don't use the land for rice products. If they use this space for fish products, they can get more than when they do not use. This culture will depend on the availability of water and the depth of water in the rice field. Coche (1967) discusses the importance of fish culture in rice fields. Usually, the available area that is used for rice production leaving for cattle breeding and sheep and poultry but it doesn't produce enough meat. Thus, fish raised in paddies would be an easy source and fresh animal proteins. Also, the fish from the paddies would cause no transport problem and be most fresh and healthy.

II

In Vietnam, there are rice-product and this is also a good way to get profit. However, aquaculture is more profitable. Vietnam has a large aquaculture area and this area is becoming bigger than rice paddies. In fact, the chairman of the Communal People's committee with the determination of the communal Party committee, authorities

and locals said the commune had focused on 'land consolidation' but they turned the ineffective low-lying rice field into areas of aquaculture in Hanoi. In addition, the city has provided VND 13 billion (The US \$725,000) to allow the commune to build infrastructure (electricity, roads, canal system, etc) to access aquaculture areas. From this change that concentrated on aquatic products, the commune continues to put the construction of the project to develop a high aquaculture area coupled with ecotourism and commercial farms. On average, each hectare of aquaculture in the commune brings about VND 102 million (US\$ 5000) of revenue (with the average production of seven tonnes a year for every hectare) whereas revenue from rice-products in the pre-change period only reached VND 15-25 million (US\$ 1400). Vietnam is blessed by location that right side of area adjacent to the sea so they can get high demand from countries that do not have aquaculture.

On the other hand, a rapid expansion of the area for aquaculture has brought a lot of issues. According to the municipal Aquatic Products Subdepartment, after the expansion of Hanoi's administrative borders, the city has over 30,000 hectares of water surface which is capable of developing aquaculture, including 6,700 hectares of ponds and small lakes and 19,800 hectares of low-lying fields. People could get a lot of profit, but this situation didn't continue for a long time. The current area of aquacultures is only 17,800 hectares with a low average productivity of three to five tonnes a year per hectares. All small ponds and lakes are near the residential areas and polluted quickly and at the same time, the area with ponds and lakes is limited because the breeding methods are based mainly on extensive aquaculture so the large-scale concentrated aquaculture the area are yet to be formed. From these things, farmers are faced with difficulties in securing investment to expand their production.

In addition, there is a high possibility of spreading diseases. Despite the rapid development of industrial-scale aquaculture, the threat of disease is a serious issue in the coastal areas of Vietnam. Aquaculture has more difficulties except for huge problems. For example, poor aquaculture infrastructure, poor seed quality and insufficient quantity, a lack of environmental protection for aquaculture areas, limitations on the availability of power, and a lack of skilled staff and workers.

III

In Vietnam, the total labor force employed in the fisheries sector was around 4 million in 2000, and the laborers worked in 720 communes across 30 coastal province and cities throughout the country. There are so many people who get work in the fishing sector but almost all people do not have high technique because of the lack of education and training for it. According to MoFI, the staff who was trained obtained the bachelor degree in aquaculture were provided for training in 2004 and many schools accept the education for students to have high knowledge of aquaculture. There are 3000 training courses for 150,000 farmers in the whole country. In addition, people started to think aquaculture is important to the situation for workers became better like income.

Almost all customers prefer to buy high-quality products even it is expensive more than it is low quality and cheap. According to the MoF (2005), aquatic seeds are the really considerable thing as a key factor in the aquaculture to make products high quality. Good quality of seed the good quality of products. The cost of the fry could be expensive but it might be important in the overall production cost. People who are in the aquaculture sector tend to care about only mature fish but they need to think about seriously from seed. Each piece has each biology and life cycle so firmer has to know the kinds of a situation for each seed. Some of the seeds were studied and supplied in Vietnam's aquaculture. In addition, there are two kinds of seed to use, which are collecting from wild and production in fish hatcheries.

The expansion of shrimp aquaculture is the huge reason for the environmental issue and one of them is the loss of mangrove forests. However, mangrove forests in fact strongly encourage quality of shrimp production. It means that protecting mangrove is a good way to make aquaculture (shrimp farming) sustainable. In Ha et al, this strategy has been promoted since the beginning of shrimp aquaculture though other place did not. There are the reasons why mangrove helps shrimp farming. For example, it increases the biodiversity of plankton or fish. In addition, mangrove forest solves other environmental issues such as pollution of water by improving water quality and decreasing disease of shrimp and fish. Besides, mangrove protect coastal areas from storms or erosion and these results keep products safety.

IV

In conclusion, there are three major types of aquaculture in Vietnam and people must consider the circumstances of location to decide which way is better to get more profit. The reason why Vietnamese people have these choices is that of the geography. In Vietnam, one region is nearby the sea, whilst other regions do are not. It has a tropical climate and long growing seasons. To have many ways of aquaculture is very good for maximizing profit; however, each has different challenges. It means people have to think about a lot of different solution that is possible to the geographic location. These things make aquaculture difficult. Aquaculture brings profit to people, but it faces a

lot of difficulties in order to maintain productivity. I think aquaculture can be more effective and it depends on how people deal with this problem. Problems are always made by people, so they should solve them. Furthermore, every solution mentioned has its vital characteristic. The action for employees or process in aquacultures such as training, management, planning, and equal payment can make the good situation to a worker as the fisher, and then, people who work in aquaculture increase. The considerations of place to do aquaculture such as zoning and monitoring protect from climate change and disease. The act to make the good situation for products like giving good feed and developing seeds quality help low quality and quantity of products. These solutions can solve the same problems which are the lack of sustainability and, which people can get profit continuously. All solution might be the best way if it is suit to each issue and difficulties are all totally different so people need to choose the effective way in each issue.

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Food in Canada and the Philippines

Sakura Minamide

Our body is made of foods we eat in everyday life. However, some food problems have been obvious. According to the University of Minnesota, if people get too many foods or eat improper foods a lot, it leads to overweighting or some diseases. Also, due to the worldwide expanded import and export, the emission of greenhouse gases has seen as a problem. In life, we should eat good food for health, though we can't say all foods have only benefits for our body. Also, on November 12, 2017, Canadian Prime Minister, Justin Trudeau, visited the Philippines to attend the Association of Southeast Asian Nations (ASEAN) Summit. While he was visiting, he went to a fast food chain store, Jollibee, in Manila. Not only fast food stores, but it is said that the Philippine cuisine has been proclaimed that it would be a next big thing. And needless to say, Canadian cuisine is popular than other countries'. In this essay, first, I will illustrate three effects from food to the health and the environment; health issues of Canadian and Filipino foods, and the environmental issues from Canada, to determine if there is a way to avoid these effects. Secondly, I will list the pros and cons of Canadian and Philippine food to determine whether we should keep eating them or not. Lastly, I will write about similarities and differences of Canadian food and the Philippine food to describe how different both foods are.

I

One of the health effects of Canadian food is obesity. One out of four Canadians is obese, type 2 diabetes rates are accelerating. According to the Public Health Agency of Canada, from 2009 to 2011, 26.2% of Canadians over the age of 18 were obese, and among those 20 and over, 4.2% had elevated blood glucose, and 7.8% had elevated blood pressure. Also, one in 10 children has clinical obesity, meaning six million Canadians living with obesity. In addition, obesity relates directly to other diseases such as cancer, heart disease, and stroke. In fact, 58% of deaths in Canada was from these diseases.

In the Philippines, obesity is one of the effects as well from Filipino food. Philippine is one of developing countries which has a high level of obese and malnutrition. According to a survey in 2011 by the Food and Nutrition Research Institute, 22.3% of Filipino adults are overweight and 6.1% are obese. Also, according to the National Nutrition Council, three in ten people are obese in the Philippines. Also, currently, the Philippines has an estimated seven million children who still experience hunger and malnutrition. As such, the Philippines has focused on battling its long-standing problem of malnutrition, while at the same time bearing the burden of increasing rates of obesity.

Lastly, the food mileage problem is one of the effects of Canadian food. Overall the research highlights that about 30% of the agricultural and food commodities consumed in Canada is imported, resulting in 'food miles' of over 61 billion tonnes km, leading to annual emissions of 3.3 million metric tonnes of CO₂. Likewise, greenhouse gas level which discharges by transport mode by an aircraft is 1,101, a marine is 130.3, a rail is 21.2, and a truck is 269.9 (g per tonne-kilometre). Besides, in a recent British study, buying local apples resulted in 87% lower greenhouse gas emissions than buying apples imported from New Zealand. Similarly, by increasing local production and decreasing transportation by only 10%, researchers in Iowa estimated that savings could range from 280 to 446 thousand gallons of fuel and from 6.7 to 7.9 million pounds of CO₂ emissions. While these are foreign examples, these would seem to be applicable to Canada.

II

Both foods of Canada and the Philippine have many good points for health. Firstly, according to a book *Delicious CANADA Happy Cuisine Trip*, by Toshiyuki Hiram, maple syrup which made in Canada account for 90% all over the world. Despite maple syrup is kind of sugar and has a lot of sucrose, one of the saccharides and the main component of sugar, some studies show it could be quite safe or even beneficial for type two of diabetes. Other enzymes which maple syrup contains such as phenol or zinc also have properties to prevent some diseases. Likewise, omega-3 fats which salmon has a lot is an essential unsaturated fatty acid which people cannot produce by their body. Omega-3 fats have many good points. For example, it decreases cancer risks, and the ingest of omega-3 fats can make tumor growth slow and make better quality life of cancer patients. In addition, vitamin D is an important nutrition to help to adopt calcium, and also helpful for formation, growth, and strengthening of bones which salmon contains. Salmon has another vitamins and minerals a lot. Besides, Filipino eat a lot of rice. According to the Statista, they consumed 12900 metric tons(MT) in 2017, and this was located in the fifth place around the world. White rice has an abundant simple carbohydrate. It is converted into energy rapidly by a body. It does not have any cholesterol, which is a harmful fat that could cause heart diseases. Foods which contain low fat or cholesterol reduce the risk of arterial and heart disease. Also, in the Philippines, the fisheries and aquaculture contribute to its economy. The Philippines have over 7000 islands and they can enjoy seafood. Milkfish is a large active silvery fish of the Indo-Pacific region

and farmed for food in the Philippines a lot. It has high vitamin B12, and this vitamin has some benefits for the central nervous system. If people gain a low level of vitamin B12, almost every cognitive function suffer.

Both Canadian and Philippine foods also have bad points for health. Despite maple syrup has a lot of beneficial nutrients and minerals, people cannot eat so much because it is kind of sugar. If people take too much sucrose, it leads gaining weight like the normal sugar. Also, if people eat salmons in large quantities to gain omega-3 fats, they also can have cancer-causing chemicals. Salmons contain high levels of mercury, lead, and PCBs(polychlorinated biphenyl) in their blood. The Environmental Working Group showed that 800,000 people in the U.S.A have an excess lifetime cancer risk from eating farmed salmon. Besides, white rice is composed of simple carbs, which is the bad kind of carbohydrates, and 100 grams of white rice corresponds to 86 grams of sugar. It does not have beneficial nutrition, but mostly sugar. This is because before eating white rice as a meal, various nutrition such as husk or germ is removed. Moreover, mango has fibers a lot, so if people eat too many, it causes diarrhea. Overeating mangoes can cause increasing weight. Per mango has about 31 grams of natural sugar. If people overeat mangoes, it causes an increase in blood glucose level as well, because ripen mangoes have much sugar.

III

The similarities between Canadian and Filipino foods are vast. First, obesity is a similarity between Canadian and Philippine foods. Most people in both countries are obese, for example, in Canada, one out of four Canadians are obese, type 2 diabetes rates are accelerating, and in the Philippines, according to a survey in 2011 by the Food and Nutrition Research Institute, 22.3% of Filipino adults are overweight and 6.1% are obese. Next, both Filipino and Canadian eat fast food often. According to a survey by A.C, it shows that 54% of Filipino interviewed eat at a fast food restaurant at least once a week. Forty-five percent of Canadian eat fast food for less than once a week. Mcdonald's in Canada had over \$4 billion in 2013, and in the Philippines, it had \$1 billion in 2016. Also, both countries' foods are affected by some colonizers. For example, in British Columbia, Canada, immigrants from Asia influenced their foods. And in the Philippine, from 1521, Spain occupied the Philippines for about 400 years and gave a big impact to the cuisine in the Philippines. Seeing from a different point of view, some people suffer from no food; the hunger in both countries. In the Philippines, 3.1 million families suffered in 2016, and in Canada, surprisingly, 4 million people suffered, though Canada is considered a developed country.

There are some differences between Canadian food and Filipino food. The amount of imported food in Canada and the Philippines are obviously different. In 2015, the Philippines imported over \$3 million thousand, and Canada imported over \$18 million thousand. Filipino eat rice a lot, whereas Canadians are not. According to the Index Mundi, in 2017, Canadian consumed 370 megatons of rice, and 12900 megatons of rice were consumed in the Philippines. Also, Filipino consume more seafood than Canadian. According to the FAOSTAT, in 2013, Canadian consumed about 800 thousand tonnes of fish, and Filipino consumed over 3 million tonnes of fish.

IV

In conclusion, as you can see, there are some issues from Canadian and Filipino foods. I think the best way to forfend this health effect is to do exercise. One of the causes of obesity is a lack of exercise, and the exercise is simple but the best way to decrease people becoming obese. Also, to decline the greenhouse gases from the food mileage, I think producing and consuming local foods is the best way. People should buy more foods which are produced in that region because it reduces greenhouse gases by not choosing imported foods. Moreover, I think by knowing these effects, people can be more careful about their health and friendly to the environment. The obese leads people to various problems, and the emission of greenhouse gases leads to global warming, but we can know how to prevent them and do it.

In addition, there are a lot of pros of both food, but there are also cons of both food. I think it is good to continue eating these foods because they have more benefits rather than drawbacks. However, people have to be careful not to overeat because these foods have nutrition people can gain, but there is a limitation. If people overeat these foods, it does not mean they can get a bunch of nutrition. They will just get an unbalanced nutrition. In addition, people should eat various foods to get balanced nutrition, not eating only specific foods.

Further, there are many similarities and some differences between Canadian food and Philippine food. In both countries, fast food restaurants have been popular so that more people are becoming obese. Philippine which is a developing country and Canada which is a developed country keep developing their own foods. In my opinion, although both countries' food has similarities, those are really different, and so do other countries, so it is interesting because those are based on a lot of things and different.

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Food Supply for Sub-Saharan Africa Rin Ito

There are poor people in the world, nearly one half of the world's population, which is more than 3 billion people. And they live on less than \$2.50 per a day. In addition, more than 1.3 billion people live in abject poverty and they live on less than \$1.25 per a day which were reported by UNDP in 2014. Also, about 805 million people can't eat enough food which were reported by FAO in 2014. Poor people who live in abject poverty have problems of food because they can't get food easily. From this problem, they have other problem which is serious hunger. According to the Guardian, abject poverty countries are dependent on the sustainability of food supply, but almost all their effort is needed to avoid from exacerbation of food consumption and production on climate, water and ecosystems, but water condition is very bad which is dirty water. I will explain three issues of food issue, water issue, agriculture issue, and the ways of solving those issues to able to supply foods than now to make less starvation. I will explain three ways of this problem that are permaculture, well water and agroforestry.

I

First, there is food issue in Sub-Saharan Africa. In the world, there are poor people. According to the World Bank, 10.7% of world's population that about 767 million people lived on less than \$1.90 a day in 2013. The rate of poverty decreased 31.5 from 1981. That changes are a quite big change, but there are still 10.7% poor people who lived on only \$1.90. Half of the extreme poor live in Sub-Saharan Africa that 28 countries in Sub-Saharan Africa are requiring external food aid and the poorest country in the world which were reported by FAO and UNDP. Sub-Saharan Africa is the most lack of food area because other areas which some parts of Asia, Latin America and the Caribbean also lack of food, but it's less than Sub-Saharan Africa. I can say Sub-Saharan Africa has the biggest problem of food.

However, there is water issue in Sub-Saharan Africa. Contents of supplying some food to the abject poverty countries are not only foods. It also can be water. For living, drinking clear water is very important because people must have over 60% in side of bodies, and if people drink dirty water, they will die because the dirty water has bacteria. According to WHO, about 842,000 people died because of dirty water. Also, according to the Water Project, about 80% of illness are connected with water issue in developing countries. From this, water is important as well as foods, so we should supply the clean water to the abject countries, too. So, I suggest Well Water. The well water is not completely clear, but it is better than the dirty water which comes from ponds.

In addition, it is difficult to provide food in own country because there is agriculture issue. In Sub-Saharan Africa, the basic economic activity is agriculture, over half of all Africans are farmers, and agriculture is very important for Sub-Saharan Africa to develop countries, but Sub-Saharan Africa's agriculture is marked by low productivity, also the skill of science and technology for agriculture is a little. Food supplies are insecure, and they are difficult to insure adequate food supply with domestic foods for people who live in Sub-Saharan Africa. In addition, Sub-Saharan Africa agriculture is mostly rain-dependent, and rain has potential to injure crops. Also, it is difficult to grazing livestock in Sub-Saharan Africa because there are risks of climate change make less the amount of grassland every year, so they have difficulty to grazing and evolve into meat self-sufficient.

II

For changing the method of mitigating manage food, Permaculture is good to produce crops. Permaculture is make good environment with sustainable agriculture and culture. And this method does not make any rubbish, and can provides foods and water, energy, shelter and some materials in sustainably to do permaculture which use ecosystem. For example, in Guatemala, there are a lot of disaster which are prolonged drought, hurricanes, earthquakes, floods and landslides. And those kinds of disaster will make the complete failure of vital crops that corns and beans. The reason why I picked up Guatemala which has 59% of people live in poverty, also there are 23% of people live in extreme poverty which were reported by WFP. Permaculture will more suit to do, when the area has a lot of disaster and it is difficult to make crops. It is very good way to have agriculture with sustainably, but it takes much money. According to one of permaculture author said "when starting out think how not to spend money." It is hard to do permaculture in poverty countries.

Well water is very common method which is charity of supply clean water for poverty countries, but as I mentioned before, the clean water that come up from the well isn't completely clean. Also, there is a limit of using because some area doesn't have water an underground. The biggest problem of making the well is it costs a lot of money. The average costs of making a well are about \$8,000 USD which reported by Water Wells For Africa. it's so much money for poverty countries, so I can say it is difficult to make a well in poverty countries.

Agroforestry is good for economic and environmental. First, people have to plant trees, after that, livestock and crops can manage those things between trees. It is the reason of why agroforestry is good for environment. Crops

and livestock are protected from wind, so if, there are extreme wind in the area, the damage of crops and livestock can mitigate than usual agriculture, but there are some disadvantages of agroforestry. For example, some of crops are being smaller than usual because some points are not enough light to grow up with tree, also water, nutrients from the soil, the farm machines are difficult to use in the confined space of a forest. From this, it is difficult to supply enough food in poverty countries because there is no other agriculture which is able to supply enough.

III

For permaculture, it will need some equipment for make complete permaculture, but using equipment that can get those in the abject poverty countries, it will be not enough and difficult. First of all, to have permaculture, they need have to make design. If that design is big scale, the possibility of failure will be high, so first, they need to make small scale of design. As I mentioned, the equipment that can get in the abject poverty countries will be not enough, so the other countries have to help them, but it will be important to substitute the equipments that can get domestically because it will make cheaper even a little. If the other countries help them, it will be easy to make completely permaculture. So they need have volunteers. That design should be make together with other countries because if other countries help the abject poverty countries that give the equipments to them, the abject poverty countries will be difficult to have failure. In briefly words, the abject poverty countries have to make the small scale of design, substitute the domestic equipments and having help from other countries will be helpful for the abject poverty countries to have permaculture.

For well water, the problem of it is water is not the completely clear water and fee of making the wells. For the fee of making the wells, it is difficult to make the wells by themselves in abject poverty countries, so they can relay to cover that fee to other countries and it will be volunteer. To disinfect bacteria, the easy way is use chlorine to the well water, but it will be difficult to drink that water because in the water, there is the chlorine. Also, the well water will have dust from the air, if there is no a pump, so they must have the cover to protect from bacteria of the air. From this, they have to get the fee of constitute the wells, substitute the domestic equipments and they need to get the pump to cover the well water from bacteria and dust to not make dirty water as much as they can. If they don't care about that, it will be the health issue and we can predict they will have disease and the rate of death will increase. If the pump is expensive, they must get it to avoid that possibility.

For agroforestry, almost all money would be for having soil preparation and buying young plants and seeds of crops. The easiest way is get seeds and young plants from other countries as volunteer, also having soil preparation as well as the well water. The second way is that not having soil preparation which means, using natural soil. It will be cheaper than actual fee. The third way is make agroforestry area with small area. It will be easy to look after crops. If there are many agroforestry area, they can make many crops that are able to supply foods domestically and it will be possible to have trade with other countries and make profits.

IV

In conclusion, Sub-Saharan Africa has three issues of hunger and nutrition which are food issue, water issue and agriculture issue to supply food to decrease starvation. Food and water are important to live on, and agriculture is very important for Sub-Saharan Africa because it will be main thing of developing economy. I think it is hard to improve these conditions of food, water and agriculture because if people who live in Sub-Saharan Africa want to improve these things, they need quite much money to improve, but they do not have much money to improve because Sub-Saharan Africa has many of the poorest countries in the world, so people who do not live in Sub-Saharan Africa has to donate or some countries has to cooperate to improve that area. For the prediction, I think people think people who live in Sub-Saharan Africa are in sad situation, but they are not to donate so much because when I saw the donate box at some shops, almost all money is coins which are one yen or ten yen. Also, if countries try to cooperate to improve them, it will be quite much money, as well as try to improve themselves. It will be a big business for countries, it will be risky to cooperate with Sub-Saharan Africa because people are not sure that it will be successful or failure. Also, countries need much money to develop their economic, so they do not have much money to help other country. From this, I think they do not want to cooperate with Sub-Saharan Africa very much.

If we want to help supplying foods and waters for people who are living in the abject poverty countries, permaculture, well water and agroforestry is good way to solve that problem, but it will be expensive, so we need to think other way to help them or mitigate those ways. The most important thing will be having volunteers for them and help them. The volunteers will not require the profit of helping, so it will be helpful for the abject poverty countries. This problem it is not only for the abject countries, this would be the worldwide problem because they do not have enough money and condition of doing those methods. So even it is not only for the abject poverty countries, they need to help each other to live with complete state of living that would be supplying foods and waters, thinking about environmental sanitation etc. The first thing that we must do is know this problem and the existence of the abject

poverty countries. If we do not know about those things, anyone cannot know what we should do and what some actions are for. We need to spread those conditions to everyone and help each other to make good relationships between countries and good countries.

Permaculture, well water and agroforestry are good method to improve the supplying foods and waters problem, but those methods would be expensive to start because those methods need training, money, and human resources to implement. However, the abject poverty countries need those methods even those are expensive. We need to make cheaper of those three methods for helping them from the lack of foods and waters.

I showed three popular methods of solving supply foods and water by themselves that are permaculture, well water and agroforestry. For permaculture, it is good way to solve this problem because this method is sustainable way to do agriculture, but it takes much cost to prepare and start permaculture, so it will be difficult to do for the abject poverty countries. For well water, it also good way to manage clean water in the abject poverty countries, but it costs much money to make wells in those countries, also areas as well as permaculture. In addition, well water is not completely clean, so there is a possibility of causing some disease from well water. For agroforestry, as well as other two methods, it will be expensive to prepare and start. And if this method is sustainability way, there are too much disadvantages to do it. So there is no proportion between agricultures and money. From these reasons, it is difficult to solve supplying foods and water by themselves with permaculture, well water and agroforestry.

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Potential for the Moringa Tree Kirara Uemura

As of right now, the continent of Africa has a lot of problems, and infant mortality is one of the most serious problem of them. According to a UNICEF report in 2013, the number of infants who died under 5 years old was about 6.6 million people in 2012. Moreover, the situation was getting worse, and in 2013 everyday 18 thousand kids, about one child every 4.8 seconds, were losing their lives. However, there is a tree that is able to be the key to save such a country under this circumstance. It is called the moringa tree. In this essay, I'd like to describe three causes of infant mortality in Africa, major effects toward our world, and how successful moringa tree toward the serious problems of children in Africa.

I

The first, I'd like to explain about major causes of infant mortality in Africa. One thing is maternal malnutrition. Evidence for that is provided by the fact that between 5 and 20% of Africa women have a low BMI. This fact results from chronic hunger. Also, about 800 thousand cases of infant mortality relate insufficient breastfeeding. Actually, the children who were raised with breastfeeding for 6 months have 14 times higher survival rate than children who were raised without it, according to African Leadership for Children Survival. In this way, breastfeeding is a critical part of survival and development children. Next one is inadequate food intake or malnutrition of infants. Because of these, children are suffering various kind of illnesses. According to UNICEF, one of the major causes of infant mortality under five-years-old is pneumonia. For a year, 1.1 million of them died from pneumonia, which accounts for 17% of the whole mortality. Moreover, following this, diarrhea accounts for 9% (58 thousand children dead for a year), and malaria accounts for 7% (45 thousand children dead for a year). Even in the household, we can prevent these illnesses. However even now more than 6 thousand children have lost their lives because of the effects of malnutrition. This relates about half the mortality rate of infants. The last one is premature births. Every year, 15 million babies, more than one in 10 births are born too early in the world, according to Born Too Soon: The Global Action Report on Preterm Birth. Also, the undeveloped area of sub-Saharan Africa and South-Asia have while more than 60% of preterm birth. "Being born too soon is an unrecognized killer," and "Preterm births account for almost half of all newborn deaths worldwide and are now the second leading cause of death in children under 5, after pneumonia." says Joy Lawn, M.D., PhD, co-editor of the report and Director, Global Evidence and Policy for Save the Children. The preterm birth results cause higher risk of death for babies. Two of most serious problems of preterm birth are respiratory distress and immature brains.

II

The second, I will show the effects by improving infant mortality in Africa including about funds, improving Africa, and issues of environment or medical. Now some organizations in the world are moving to resolve the problem of infant mortality in Africa. An example is UNICEF. It is trying to resolve it with a project "Commuting Child Survival: A Promise Renewed". In this project, there are various things support it to achieve goal. The funds to prepare tools, to organize environment, or for personnel expenses. Also, many staffs who are dispatched to local, or who assist from each country, and resources. By resolving this problem, next, they can use these things to improve other problems in the world. It means it can decrease one of problems that this world is holding. Also, about second effects by solving the server issue, if infant mortality was able to be decreased remarkably, it would mean Africa can get labor forces more than now. By doing so, people who are going to work or play an active role in developed country from there will increase, and authority of Africa is going to be stronger and bigger existence in the world. According to unicef, even now, population of Africa is increasing. In 1950, it was 230 million (It accounted for 9%), in 2015 it increased to 1.2 billion (It accounted for 16%). And unicef predicted that in 2050, it going to increase to 2.4 billion, moreover by 2100, it going to be 4.2 billion. It is accounts for almost 40% of population in the world. On this way, Africa will give extensive influence to the world, and by resolving infant mortality, it going to be more remarkable. In addition, there are positive effects about environment or medical. Decrease of infant mortality, it means that developing environment and medical, too. The causes of infant mortality are almost related to bad surroundings or inadequate medical equipment and technology. To assault these issues, it can be the way to find new solutions or invest new skills of medical or medicine. In addition, it is able to make use of these at other serious situations or problems in the whole world extensively. Basically, decline of infant mortality can be bread to make the earth advance in the future.

III

Finally, I'd like to talk about how moringa trees have a lot of possibilities to save lives of African children. The moringa is versatile in preventing various illnesses or serious situations, so it has some other names such as

miracle tree, medicine box tree, or tree for life. The moringa tree has countless nutrition. It has 7 Vitamins, 6 Minerals, 20 Amino acids, and 46 Antioxidants, moreover Vitamin A, Vitamin B1, Chromium, Manganese, Potassium, Iron, Copper, Vitamin B2, Vitamin B3, Zinc, Magnesium. These nutrients are said to be comparable to the quantity of many capsules. In other words, leaves of moringa have 1/2 times vitamin C of orange, 9 times the protein of yoghurt, 17 times the calcium of milk, 25 times the iron of spinach, 4 times the vitamin A of carrots, and 15 times the potassium of bananas. Almost all its is be able to be used as food or medicine. Moringa leaves, bean pods, and flowers are good food (flowers taste like mushroom). Moringa seed oil could be used for hair oil, massage oils and beauty products. There are benefits about environment where the moringa trees grow. The location where moringa trees grow should be sunny, and not too windy, receiving at least 6 hours of sunlight daily. At least if these conditions permit, even at any wasteland the moringa tree is be able to grow. It means tropical regions is the best place to grow moringa trees. Africa has serious infant mortality, it satisfies the requirements enough to resolve the problem. It doesn't need any fertilize and much water, and people don't need to take care of it too much as well. That's because moringa has incredible vitality. it is approximately 3m and thin originally, but it is going to be fine tree during just one year. Furthermore, moringa gives effects surrounding environment. The moringa tree is center of attention and expected from around the world as the plant that could be protect natures. Moringa has ample and various nutritional quantities in its leaves, flowers, oil or roots and gives a lot of effects to our health. But it is not just to human. It gives big effects to surrounding environment as well. Seeds of moringa tree has ability of cleaning water. They work toward bacteria and viruses that are found in contaminated and turbid water. It can produce and keep clean water. Moreover, leaves of moringa tree has the highest absorption carbon dioxide. According to the research of moringa and global warming, 1 person emit approximately 320kg of CO₂ in a year. In the case of 23 Japanese Cedar trees, it takes 50 years to absorb all amount of the CO₂, however it needs just 2 moringa trees and it takes only 2 years. These differences are obvious.

IV

In conclusion, as I said effects are making infant mortality more serious and bigger problem. Woman and children are affected directly by it. Especially, newborn babies have low immune system, so they are susceptible to various sickness. That's why they have to take enough nutrition to improve their body's immune system and to growing. They will need more nutritious foods. In addition to this infant mortality, it influences a lot toward this world. By resolving this serious problem, funds can be used for other serious problems in this world. It become increasingly likely to resolve issues immediately. Also, if they can finish increasing of infant mortality, in conjunction with it Africa can improve itself by getting more labors. In addition, the environments or medical skills will be advanced with resolving of infant mortality, too. Therefore, moringa trees are efficient way to solve this issue. Moringa trees have a lot of benefits for people, and environments as well. This tree has enough possibility to resolve serious infant mortality in Africa. The moringa tree has many and various nutrition, and it is enough for babies' health. Even in Africa where it is difficult to make vegetation, it is possible to grow enough moringa trees that has strong vitality. Moringa tree can be a key to improve not only human, but surrounding environment, too.

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Adoption in Japan, Canada, & the United States Shinzan Izuta

In this world, there are many children who have no family. They are desiring to get a family. The UN guidelines say that it is desirable for children, who cannot grow up under their real parents live at home through adoption and foster care system. But according to Japanese Ministry of Health, Labor and Welfare, there are about 46,000 children, cannot live parents. In America, the number of special adoptions per year is approximately 50,000 however in Japan, the number is just about 300 per year. It because the environment for adoption is not enough and it keeps the number lower. In Japan, we have problems that disturbing adoption. The biggest problem is the too powerful parental prerogative of real parents. Instead of waiting for the change of society, people are standing out and trying to help the children. Actually, the private organization increased the number of special adoptions which is 5 times more than 5 years ago. In this essay, I will introduce three current situations, causes, and main problems of adoption in Japan, Canada, and the United State to know what is the difference of adoption in Japan and in other countries. Also, give an answer to why there are fewer adoptions in Japan and more adoptions in North America and give a solution for it.

I

First, I will write about the current situation of Japan. About 80% of 46,000 children, cannot live with parents are live in facilities such as infant schools and child care homes. About 15% of them are live in a foster family or family home. On the other hand, in Japan, 1 pair in 6 pairs of married couples suffer from infertility and there are 500,000 people who take pregnancy treatment. In Japan, there are 2 systems for children like as I wrote. That is adoption and foster care system. Foster care system is an institution that temporarily keeps children in their homes instead of parents who cannot be raised and there is no legal parent-child relationship. Foster parents can get a foster allowance and child support expenses from a municipality. Adoption is a system that establishes a legal parent-child relationship based on the Civil Code, and adoptive parents will have custody of their children. There is no financial support from the municipality etc to the family. The adoption system can divide into two. Ordinary adoption and special adoption. Ordinary adoption is the widely used system for such as trace. Special adoption is a system to get a stable home and like a real child. About 550 children are adopted per year. This number is very low in developed countries.

Second, I will write about the current situation of Canada. According to Adoption Council of Canada, approximately 1 in 5 Canadians are touched by adoption. That means they have a relationship with adoption. So, almost 7 million Canadians are affected by adoption. There are about 78,000 children in Canada's child welfare system. Adoption and child welfare come under provincial jurisdiction, so each province has its own laws and regulations. The main kinds of adoption in Canada are public domestic, private domestic and private international overseas. Public domestic is an adoption arranged by a public or government agency. Private domestic is and adoption within Canada that is not arranged by a public agency. Private international overseas is an adoption at an outside of Canada. For children adopted through the public system, there is usually no fee at all. But private adopted for children born in Canada costs about \$15,000-\$25,000. According to the Statistics Canada, many Canadians are choosing to adopt a child with international adoption. In 2009, 2,127 children from abroad adopted by Canadians. The number of adopting is increasing year by year. Popular countries are China, Russia, Korea and Hitai. One of a reason why Canadians adopting from abroad is that in 2008, Canada introduced an additional process that grants Canadian citizenship to internationally adopted children at the time of entry into the country.

Third, I will write about the current situation of adoptions in the United States. In fact, the US adopts more children than the other countries. According to the US Census, one out of every 25 US families has an adopted child. Surprisingly, in America, about 135,000 children are adopted every year. Adoptions can be arranged either through a state agency, an adoption agency or independently. There are private and public adoption agencies. The adoption agencies must be licensed by the state. The average age of waiting children is 7.7 years old. About half of adopted children under 18 in US households were white, non-Hispanic, according to the 2010 Census. The intercountry adoptions peaked in 2004. More than half of all foreign-born adopted children were born in Asia. 40% of adopted children are different race, culture, or ethnicity than one or both their adoptive parents. And 71% of adopted children lived with a white parent. But recently, there are many people who want a baby soon after they born. There is a long list of applicants.

II

First, I will write about the causes of why there are fewer adoptions in Japan. In Japan, even though there is the system of special adoption, people don't often adopt children. The reason why adoption does not increase in Japan

is that Japanese emphasize the connection of blood and many people care about publicity. The biggest reason is a strong parental prerogative of real parents. A real parent has the parental prerogatives even if they do not come and meet their children for a long time. Sometimes those real parents reject adoption and foster parents because some real parents think they want to raise their children when they are ready for it. For special adoption, parental prerogatives are moved from real parents to foster parents, so foster parents need the consent of real parents, but as I wrote, it is hard to get consent. For that reason, even special adoption is difficult to establish. However, for the case of people who cannot get in contact with real parents and adoption is not established, there is a law. It is said that special adoption can be carried out in Article 817-6 of the Civil Code. In spite of that, the child consultation center is afraid of strong parental prerogatives and problems so they reserve it as special adoption. Also, the child consultation center is very busy about top priority cases such as abuse and there are not enough workers for it.

Second, I will write about the causes of higher number of adoptions in Canada. As I wrote in the essay of the current situation, approximately 1 in 5 Canadians are touched by adoption. So, in Canadian society, it is commonplace to adopt children. When I was staying in Canada, some Canadian friends told me that they are adopted. They told me about it normally. Also, my English teacher told me in front of students that she has two adopted children. In Canada, there is an environment in which people can tell about adoption easily and people accept about that. Canada is a multiculturalist state that is made by immigrants. According to the 2001 census by Statistics Canada, Canada has 33 ethnic groups with at least one hundred thousand members each, of which 10 have over 1,000,000 people and numerous others represented in smaller amounts. Overall, in Canada people has a diversity of ideas and people do not judge about a person by their skin color and religion they believe. Those are some of the reasons why Canadian people choose to adopt a child through international adoption. And in Canada, if people adopt a child, there are many states where they can get more subsidies than in Japan, for example in Quebec.

Third, I will write about the causes of higher number of adoptions in America. In the United States, adoption for children who need protection is fulfilled in terms of the institution, and it is regarded as a means of social care. Consent of real parents is unnecessary when delegating foster parents to another household. There is also a rule of a clear deadline that after one year and three months, and if there is no special circumstance the real parents' parental prerogative is deprived. Also, real parents will lose their parental prerogative if they are judged not to properly care for children, such as not visiting for a certain period to see their babies to foster parents or facilities. One of the reasons why there are many adoptions in the United States is because many people undertake adoption as part of charity work. It is often based on a religious spirit. I think the primary reason is that they openly adopted in a very open form and it is opened without hiding around even after adopted. There are many divorces in the United States, and there are also a lot of remarriages, which means that couples will live with each other's children, and family members, who are not necessarily only connected by blood. According to "Annual Estimation of Population Dynamics Statistics" announced on January 1, 2015, by the Ministry of Health, Labor and Welfare, the divorce rate in the United States were "3.6" which is second in the world among major countries. This is the number of divorce per 1,000 population. Because it is such a society, there are so many adoptions, but there is no discomfort at all. Moreover, there are many famous celebrities, adopted children.

III

First, the problem of child consultation center. Child consultation center needs to tackle special adoption. The revised Child Welfare Act was promulgated in June 2016 and special adoption was clearly positioned as a task of child consultation center. However, as I wrote before, they do not have enough workers to work for adoption, because they are busy to work for child abuse. But if they can work hard for special adoption, the babies who go to the infant hospital definitely will decrease. To solve this problem, provide financial support from the country and local governments so that private organizations can act instead for special adoption. In 2012, the number of special adoption cases which worked with private organizations was 115. but even people started caring about it, they have the limit because of cost. They cannot get financial support from the country and local governments.

To increase the number of special adoption. It is necessary to change the situation of society and administration. They need to understand how important to raise the child with a family who would like adoption. Also, it is important to build steps from returning to home or adoption after protected children are deposited in temporary safekeeping place. As a solution to the problem of not enough people who are supporting adoption, Japanese government needs recognize the people that in addition to special adoption, there are various other things such as foster care system and maternal and child support. Also, it is important to change the system to a special adoption is an option when it is a single male or female, economical, and those who think that they want to have children.

As I wrote previously, some real parents stopped raising their child while refusing to cut out the relationship with the children. In such a case, the child guidance center will instruct the parents, but it does not solve this problem. So when people promoting special adoption, the power of court becomes important. Under the law, it is decided that

the child to be adopted by special adoption is up to 5 years old. Because it is important for children to grow up at home when they are small, for that reason they had to set the number. But because of that, children over the age of 5 have no chances of special adoption. We need to change the system. In principle "consent of real parents" is necessary, but there are exceptional systems that allow special adoption by the court judgment. We need to disseminate this information more.

IV

In conclusion, compared with the current situations of Canada and America, Japanese number of adoption is very few. This situation must be changed right now for 46,000 children. In Japan, it became an ordinary thing to raise children who do not have a real family in facilities. But actually, it is very important to raise children in the homes, because by raising up and living at home, they can feel the love from specific people and be a kind person and make relationships with people with love. Also, they can have a sense of security about after they raised up. Moreover, compared with Canada and America, Japanese number of adoptions are very few. That main cause is the powerful parental prerogative of real parents. In Japan, even real parents who do not meet with their child have the parental prerogative. So, it makes it hard for people who want to adopt child. There are rules about it in America and Canada so people do not need to care about the parental prerogative of real parents. That is why, the number of adoptions are bigger. So to increase the number of adoptions in Japan, we need to solve about the problem and other problems. The other reason why there are a large number of adoptions accepted in the United States and Canada is that both countries' governments are promoting adoption. So to increase the number of adoption in Japan, we need the power of Japanese government. If as many pairs of special adoption are established, adopted parents and adopted children will increase. By doing so, we know "families" and "shapes of happiness" that many people did not know today, then we can think of special adoption as own problem also I believe that we can improve the reality that adoption is just 374 cases in 2011 in Japan.

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Poverty in Democratic Republic of the Congo

Shizuku Nomura

From around 14th Century to the 19th Century, the Kingdom of the Democratic Republic of the Congo was prosperous. However, DRC was colonized by Belgium in late 19th century. In 1960, they independent from Belgium but an internal conflict has happened and they fell into confusion. Then 1997, Laurent-Desire Kabila took power and renamed the country the DRC. However, Armed groups continued their activities in the east, security is still unstable. Poverty in DRC has worsened since 1980. And it is one of the poorest country of the world. According to the African Development Bank, 72% of rural households and 59% of urban households are poor. The poverty rate of DRC was 64% in 2012 but it remains high in the DRC and according to United Nations Human Development Index, DRC was ranked 176 out of 187 countries in 2015. Then nearly 40 % of children under five years old suffer from malnutrition and most of the population lives under conditions of moderate to serious food insecurity. Poverty in the DRC has continued since 1980, and is becoming a serious problem. Poverty in DRC has a lot of serious problems and people in DRC have suffering from poverty over the years. And it still continues even if it's improving a little. In this essay, I'm going to explain about current situation in DRC including causes, problems and solutions.

I

First of all, one of the major causes of Poverty in DRC is health treats. Especially there is a malaria outbreak, and it resulted in approximately 6.7 million cases nationwide in 2009. Also, water-borne diseases such as diarrhoea, bilharzia/schistosomiasis and cholera are common in Congo. Epidemic of cholera happen every year and around 3% of those who contract the disease die because of lack of treatment. However, the largest threat to health is malaria. And two out of every five deaths among young children are caused by malaria. According to the data of WHO 2015, about 6.71 million people are infected annually, and about 25,000 people have died, and about 800,000 people are infected annually in Kinshasa and nearly 2,000 people die each year. Then, there is a conflict that has been strenuous since the early 1990s. As a result, more than 5.4 million Congolese died and over 2 million have been displaced. Then sexual violence and the use of child soldiers happened and it have badly scarred their communities. Sexual violence has physically and psychologically hurt women and left them unable to care for themselves or their families. Identically, the use of child soldiers has devastated communities by raising death tolls and making parents unable to protect their children from harm. Furthermore, there are things that is insufficient in DRC. For example, vehicles, roads, crossings and navigation channels are very poor condition which makes transport and other costs high. And there is a low agricultural productivity as a result of traditional cultivation methods. It is difficult to marketing because of weak collection and distribution organizations, basic processing equipment and traders and consumers.

II

In addition, there are some important issues which we need to solve. One of the biggest impact of this problem is Economic Impacts. 2.5 million people in Kinshasa live on less than US\$1 per day. In some parts of eastern DRC, people are living on US\$0.18 per day. After sharply increasing to almost 9 percent from 2013 to 2014, the real GDP rate decelerated in 2015 and the growth rate is not expected to exceed 2.5 percent in 2016. Furthermore, in 2016, the decrease in income and the rise in inflation rate mainly decreased to 0.1% of GDP to 1.5% of GDP as a result of annual average of 5.7%. Secondly, there are Education Impacts which is for children. In DRC, four out of ten children are not in school. 400,000 displaced children have no access to education. And then 3.5 million children of primary school age are not in school, and of those who do attend, 44% start school late, after the age of six. In addition, national data indicate that only 67% of children who enter first grade will complete sixth grade. Of those who reach 6th grade, only 75% will pass the exit exam. Thirdly, there are impacts that is about health. DRC's child mortality rates are among the highest in the world. According to the country's Demographic and Health Survey from 2013 to 2014, 8% of children under the age of five suffer from acute malnutrition. And about 43% are chronically malnourished and show signs of stunting. In North and South Kivu and Kasai provinces that figure is around 53%. According to USAID, 148 out of 1,000 children will not reach 5 years old. An estimated 465,000 children of DRC die annually from preventable diseases such as malaria, pneumonia and diarrhea. And only 31% of children under 1 year of age are completely vaccinated, 46% of children under 5 years are weakened, showing chronic malnutrition.

III

Lastly, there are possible solutions for serious issues. For health problem, it is necessary to gather people who are having job about hospital and medicines, and increase facilities such as hospitals and nursing are one of the most important solution. And, provide Antimalarial and vaccination of malaria because malaria has been preventing so much in DRC. And then, it is also major resolution that provide counseling, medical treatment and legal support

for victims of sexual abuse. For about education for children, the completion rate of primary education of DRC has increased from 29% in 2002 to 70% in 2014. However, it is still one of the countries with the largest number of children out of school. To hire more many teachers, and training them and enabling children to access basic education at a safe school. And promoting a fair educational system for growth and employment, provide free primary education to all children. Then, developing a mechanism for quality assurance, creating an environment that high quality education systems. These are possible solution for education in DRC. In order to solve economic problems, it is important to rebuild the economic relationship between communities torn by violence. And then, involve the DRC, Rwanda and Uganda in projects that promote mutually beneficial economic benefits through social, ethnic and geographical divisions. Furthermore, the international community needs to ensure that from the rich natural resources of Congo is retained in the region. And Diamonds, gold, Colton and other mineral resources should fund investment in conflict communities, improve water access, educational services and agricultural support.

IV

In conclusion, I think conflict which is one of the major causes has become calm down than before, but I think it will be continue and it'll take long time to finish. Also, I think cause of malaria influences negative for Poverty in DRC a lot. They will need more medicine and doctors or nurses for malaria. I think that malaria will be continued more, because it is an infectious disease. And this problem also will become more bad situation if disease continued. And I think they need more help and there are some people who know about poverty in DRC but don't know about causes or facts of Poverty in DRC, so I think to know about that is one of the good ways to mitigate the problem even if it's a little. Also, there are so many negative impacts that is difficult to solve. I think some of that will take long time to solve, but some of that can be solved if more people cooperate for that. And I think that knowing current situation will be important and good way to solve even if something went badly. Some of these are difficult to do, but all of that are so important for the future of DRC. I think that these solutions will help more people in DRC and it will make it better. And I think donation or volunteer activities are also works as a solution of poverty in Congo. I hope that these will be practiced and changed even if it is a little bit.

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The Ways to Deal with Gender Gap in Agriculture

Shizuno Hiraoka

These days, more than 70% of people in sub-Saharan Africa depend on agriculture to live. In sub-Saharan Africa, over 60% of the women who are employed are working in the agricultural field, but the most of them are small farmers. However, despite this important role of women in the agricultural field of Africa, two recent reports by the Food and Agriculture Organization and the World Bank show that there are gender gaps between male and female farmer. This gender gap issue is also happening in all over the world. According to the USAID, approximately half of the agricultural workers in the world is made up with women, but women workers still can't have the same access to productive resources as men because of the gender gap. If women workers could increase their farm yields by 20-30 percent, it is possible to feed an additional 150 million people. Which means that improving of the position of women in agriculture brings big effects on society. Also, this report provides the evidence which acknowledged that female farmers will lead to better agricultural productivity and food security by increasing access to land, information, credit and agricultural skills. In this thesis, I will explain three effects of the achievement/empowerment of women in agriculture which are the economics improvement, the strengthening of food security, and the encouragement of the gender equality to determine and prove how women can be helpful to this current world. Then, I will compare and contrast how does agricultural profits which made by female worker bring a difference to the world. At last, I'd like to propose three solutions to the problem of gender gap in agriculture: educating female workers about agriculture as male workers who were educated, educating kids who may take farmer jobs for extermination of gender gap towards the future, and creating organization for solving gender gap.

I

Firstly, I'd like to detail about the effects of the achievement/empowerment of women in agriculture. In one of the major effects, the economies of society will grow than the only men-made world. If women have opportunities same as men, the income from agriculture will increase 20-30% more. The increasing of income is related to grow the economy. According to World Farmers' Organization, the time which women use won't be wasted for other such as housework, it will be use effectively. Which means women can work so effectively at agriculture. In addition, women's or girl's can have the time to invest education from unequal everyday work. This is related to improve women's economic autonomy. According to International Development Research Center, leading in time to a virtuous cycle in which women's economic emancipation facilitates a greater voice in decision making, which in turn leads to the removal of more obstacles that impede their economic autonomy. This may occur through the market, where lower economic opportunities for women result in reduced purchasing power for female-headed households, for example. The second major effect of the achievement/empowerment of women in agriculture is the food security will be strengthened. Improving of the food security will be the tool for against hunger and malnutrition. According to Food and Agriculture Organization, it will cause decreasing of low birth weight babies, and the percentage of undernourished children below 5 years of age. In addition, by being strength food security, it will able for people to get sufficient quantities of food available on a consistent basis, and get sufficient resources to obtain appropriate foods for a nutritious diet. Moreover, it will relate to get appropriate use based on knowledge of basic nutrition and care, as well as adequate water and sanitation. Finally, and most importantly, the achievement/empowerment of women in agriculture will affect to improve the gender equality. According to Food and Agriculture Organization, changing the role of women in agriculture means breaking the rules of culture, segregation, prejudice and custom. It will improve women's economic autonomy, and decreasing women's time poverty because of the housework and other inequalities jobs. Women's or girl's can have the time to invest education equally as men and boys. From improving the gender equality, it can improve women's status within the community and can create the necessary social consensus for their greater role in rural institutions and local governance.

II

Secondly, I will compare and contrast how does agricultural profits which made by female worker bring a difference to the world. First, female worker can be the way to solve poverty. According to African Development Bank Group, drawing on Mukasa and Salami (2016) who found that gender productivity gaps in Nigeria, Tanzania, and Uganda were respectively of 18.6 percents, 27.4 percents, and 30.6 percents, closing gender productivity differentials is estimated to yield production gains of 2.8 percents in Nigeria, 8.1 percents in Tanzania, and 10.3 percents in Uganda. However, by women can work on agriculture with same opportunity as men, these production gains would subsequently raise monthly consumption per adult equivalent by 2.9 percents, 1.4 percents, and 10.7 percents in Nigeria, Tanzania, and Uganda, respectively and would help around 1.2 percents, 4.9 percents, and 13 percents households with female-managed lands climb out of poverty in Nigeria, Tanzania, and Uganda, respectively.

Therefore, by losing gender gap in agriculture, people can get the way to solve poverty. Second, by solving gender gap, not only solves poverty, but also can be a great profit on the economy. According to 'The State of Food and Agriculture 2010-2011 report' issued by the FAO in 2011, it says "If women had the same access to productive resources as men, they could increase yields on their farms by 20 to 30 percent. This could raise total agricultural output in developing countries by 2.5 to 4 percent, potentially reducing the number of hungry people in the world by 12 to 17 percent." In addition, the report shows the gender gaps in accessing agricultural resources such as land, livestock, farm labor, education, extension services, credit, fertilizers and mechanical equipment. According to the FAO, the agriculture sector is underperforming in many developing countries, in part because of gender inequality. Closing the gender gap would generate significant gains for agriculture and for society. Therefore, it is necessary to introduce female workers by knowing current conditions of agriculture or the economy.

III

Finally, I'd like to propose three solutions to the problem of gender gap in agriculture. First, the solutions for increasing women's achievement in agriculture is giving female workers knowledge on agriculture or give equivalent knowledge as men. Educated women regarding land rights which means raising women's legal literacy, increasing the dissemination and accessibility of information and establishing supporting legal services are essential in promoting gender equity in land programmes. Legal literacy means that women are aware of their legal rights and know how they can be enforced and protected. Next, in order to fully fill the gender gap, it is ideal to create a situation that it is natural that there is no difference between men and women, so it is important to teach about gender equality to children who will support agriculture in the future. "Gender inequality and early childhood development" This report examines the impact of gender inequality and discrimination on the survival, healthy growth and early years' development of girls and boys and the rationale for investing in gender-transformative early childhood programming in order to break the cycle of gender discrimination, promote the rights of girls and boys, and advance gender equality. Lastly, Gender equality has become a problem in various fields such as agriculture and business, though people or countries cannot make a specifically and practical solutions for the topic. So it may be helpful for people and countries to unify the gender gap problem which occurs in any fields and set up an organization to handle it collectively. It helps to ensure credibility of information, discover tasks for this topic, and show ways to approach to those tasks.

IV

In conclusion, there are several effects of the achievement/empowerment of women in agriculture and two big differences which female workers can bring them to the world more than the situation in only male workers. Moreover, there are three solutions for solving the problem of gender gap. For the effects of the achievements and empowerment of women workers in agriculture, there are the economics improvement, the strengthening of food security, and the encouragement to the gender equality. I think reasons why there is still gender gap in the world even people insist about it, are cultures, history and accustomed. After all, in order to change something bigger, the generation must change. If you want change something really new, you have to teach it to people who know nothing. Because there are cultures, common sense and history which is familiar to people. To change them, you must start from a state of ignorance newly. However, I think that improving the status of women in agriculture leads to an overall increasing of the female status in various fields. While the population is increasing in the world, problems such as food shortages will occur, but the most familiar and the basic solution for those problems is rising the status of women. Because they are the mother. For two big difference which female workers can bring them to society between with gender gap and without gender gap, without gender gap, people can gain productive profits than by only male workers work on agriculture. Also, gaining profits is related to get positive effects on economy because people can get more income. In addition, giving same situation as men to women is necessary to decrease gender gap on agriculture. Therefore, currently, the world keeps having poverty and hunger problems, so there is no other choice but to lose gender gap on agriculture. For three solutions that can approach to solve gender gap and help women's achievement, there are the ways to educate female workers about agriculture as male workers who were educated and educate kids who may take farmer jobs for extermination of gender gap towards the future, and creating organization for solving gender gap. Gender equality is necessary for an important step to keep surviving this world. Because, population is going to increase more. Then, there will be people who starve because of the lack of food. Therefore, women need to have equal rights as men. Women's right is not only using for producing food, but it can be the one of ways to save humans.

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The Interests of Food Additives Shunsuke Watanabe

Nowadays, thanks to the progress of technologies, we can preserve foods longer than before. It has been said that the achievement really relate to food additives. Some food additives are banned to use in Japan because they are likely to cause cancers and some serious diseases to children. I would like to explain about food additives. What if food additives do not exist in our lives. It has been said that the distance between food additives to lives of people are getting closer by passing years such as convenience stores, any kind of snack and the premade food that is sold in supermarkets. Food additives are not always human made cruets. Natural stuffs also can be categorized as food additives. All things considered by the government as safe to make taster better can be food additives. Too much use of them can be dangerous to human bodies but the truth is some of them keep foods lives longer. They have benefits and determent. So people cannot judge them just from one perspective. People need to pay attention to them very carefully when do that. In this essay, I will describe advantages and disadvantages of using food additives and how these things affect to our lives. I would like to discuss about a few kinds of food additives specifically. Food additives have universal functions. Each one has different jobs which works to foods. There are over 1,500 kinds of food additives are excused to use in Japan now. It is extremely a huge number of food additives in the world compared to other countries.

I

At first, I will describe about food preservative. There are three topics here beginning from letting less risks from alimentary intoxication and end with it has been used in many foods such as Cheeses, meat batter products, meat products, seafood dried products, tsukudani, beans, soy sauce, dipping, koji, and etc. They are made to control the proliferation of microorganisms and better condition to prevent. It leads to have less risks from alimentary intoxication. On the other hand, there is a risk to take them. If people take them a lot at one time, the activity of Intestinal bacterial activity can be less work. It is so convenient to use so that appears in many foods such as cheeses, meat batter products, meat products, seafood dried products, tsukudani, beans, soy sauce, koji, and etc.

In this paragraph, I would like to explain about natrum as a food additive perspective. This one has a long history and used from ancient Rome period for wines. They prevent over-fermentation of grape yeast in wine and they also disinfect the grapes. However, the same as the last food additive, if people take this too much this one can be a poison too. For people, when they take 4g of natrum, will show up addiction symptoms. And the next step will appear when people take 5.8g, then they will have a strong stomach. It has multiple faces. Sometime it becomes preservative, bleacher, and manufacturing solves. As examples they are used in Gourd, sugared, beans, dried fruit (such as dried apricots), shrimp, dead cherries (cherries candied), wine, and konjac powder.

II

In this part, I will describe three causes of why food additives are coming popular these days. Using food additives, distributors can save money. The natural basic cost of chemical food additives are actually cheaper compared to natural food additives such as salt and sugar. In addition, for sugar, the strongest one is 13,000 times sweeter than natural sugar. The first purpose of food additives are make lifespan longer and it's still one of the most important purpose of using them. So the quality of food will be stable in good condition. It will lead to less waste because people can store the food longer. And will be less alimentary intoxication. They can give nutrition, which does not have enough nutrition in the base foods. This is a kind bold example but supplements are the example of it.

Then, here I will talk about the effect of using of food additives to humans. Particular food additives are likely to occur cancer. Some food additives are banned in Japan because of that reason. However, even in overseas some food additives are banned, in Japan some ones aren't even they might be dangerous. The effect of food additives are not just for ourselves they can affect to babies too. Unviability can be happened from eating artificial sweeteners. Even people got success to be pregnant, the percentage of birthing deformed children increases. Babies can get food additives through unviability cord. Another good point of food additives are they can make foods better like taste, smell and colour. Famous once are sweetener, coloring matter and thickener. Their working are giving sweet tastes, giving colour and adjustment and suppress development of fungi and bacteria, improve food preservation, prevent food poisoning. In fact, the impact of these food additives are quite big. For example, the nutrition facts of Kakigori syrup are the same taste that are sold in the store even that are written different tastes. People are tricked the food additives so they have like magical power. food additives are a lot of food additives happen allergic reactions. Sulfites, usually contains wine and dried fruits are likely to happen grave allergic reactions, especially who has asthma. Benzoic acid and sodium benzoic that are used for fruit juices and pops these can cause allergic reactions such as hives. Second,

incommodity of food additives has harmful effect for children. Kids are likely to be more sensitive to substances than adults and food additives are no exception.

In the final paragraph, I would like to write about solution of the problems that I have listed in the last paragraph. People who cares about food additives should not eat them. It is not easy to avoid eating them but it is the simplest way not to care about food additives. The second solution is each country make the law of them stronger and more powerful. Nowadays, some details are unclear so consumers don't know what to believe in. Therefore, they have been lost on internet news like fake information. People can change products which is in stores by consumption activities. Companies don't sell goods that is not popular so consumers can change by buying no additive foods. Some people would say, they were already tested by government so they will keep eating food additive foods with no doubt.

III

One of the major advantages of using food additives are able to make the length of life longer and make food tastier. First profit of using food additives are they can lengthen the lives of foods. It is one of the most beneficial parts of food additives. There are three famous food additives that can lengthen the life of foods. They are antioxidants, preservatives and antifungal agents. However, today I want to talk about Antioxidants mainly use for processed fruits, meat products, fishery produced and snacks and so on. So they are used a lot of ways. "Antioxidant" is a food additive that prevents oxidation of other food itself by oxidizing itself. One of the roles is to prevent deterioration of colour and flavor due to oxidation of oil and fat foods. The second one is to prevent discoloration and browning of processed fruits and pickles. Third, to prevent the generation of harmful peroxides and carcinogens. Oxidized foods lose their nutritional value, and antioxidants are used because they may cause gastrointestinal disturbance and food poisoning when they are poisoned with peroxide. Another good point of food additives are they can make foods better like taste, smell and colour. Famous once are sweetener, coloring matter and thickener. Their working are giving sweet tastes, giving colour and adjustment and suppress development of fungi and bacteria, improve food preservation, prevent food poisoning. In fact, the impact of these food additives are quite big. For example, the nutrition facts of Kakigori syrup are the same taste that are sold in the store even that are written different tastes. People are tricked the food additives so they have like magical power.

There are also disadvantages of using food additives. First drawback of food additives are a lot of food additives happen allergic reactions. Sulfites, usually contains wine and dried fruits are likely to to happen grave allergic reactions, especially who has asthma. Benzoic acid and sodium benzoic that are used for fruit juices and pops these can cause allergic reactions such as hives. Second incommodity of food additives have harmful effect for children. Kids are likely to be more sensitive to substances than adults and food additives are no exception. Migraines and headaches in children are frequently associated with the consumption of additives. In fact, it is reported that after children drink fruits juice kids lost concentration, it was difficult to let them sleep and disturbing others compared to usual.

Next, I am going to write about sodium bicarbonate. They are mainly known as a baking powder which is for Sponge cakes, pancakes, cookies, cake, and etc. And can be used in a way of stomach medicine. They are not only can use as a food, they can also use as a cleaning stuff. For example, deodorant effect and antifungal effect. There was an experiment of using sodium to dogs. It was giving sodium to the dogs for 3-4 weeks from their mouths. When the amount reacher to 150g, they threw up and got weaker and they died.

IV

In summary, there are the same numbers of profits and drawback of using food additives. Many foods are being used food additives nowadays. I think that it is not possible not to have any food additives into foods. Consumers need to be educated about food additives more to make their lives longer and safer. I think every consumer at least needs to know what food additives are deeper otherwise; they cannot judge the products which contains food additives correctly. Then, they can choose by themselves. There are many as drawbacks, especially in profitability. It is the same as knives. If the user knows the correct way to use, it will be so convenient but if not it can be dangerous and can hurt someone. In the case for food additives are, companies need to know what is dangerous or not because some food additives are banned to use in and likely to cause cancers. For that the government need to know about it themselves more.

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How We Are Going to Decrease the Overweight Problem in Latin America

Shunya Masutomi

In Latin America, the obesity problem became a serious problem in recent years. According to a report by the Overseas Development Institute in 2015, more than 56% of Latin American adults are overweight or obese, compared to a global average of 34%. If your BMI is 18.5-24.9, you're absolutely obese, and that means you have a dangerous risk to get some diseases, but most of people who has this problem don't really care about being obesity and they don't know how to lose weight correctly, this is why the number of obesity problem increase in the world recently, especially in Latin America. Most of people actually don't know what the issues are because they don't have enough information about obesity problem, and if the body is overweight, it's extremely dangerous. The possibility of getting cancer will be increased, and they may die at higher rate than people who are not overweight. I will explain three issues of obesity problem and reasons why people being overweight, and also, I suggest three solutions against being the overweight problem.

I

First, as you know, obesity problem has a significantly negative effect on body and health, because overweight linked to increase a risk of heart diseases, so if you or your partner is obesity, it increases the risk of having diseases, the more you weigh, the more blood that needs to supply the oxygen and nutrients. So if you would gain the weight, it takes more pressure to move the blood around the body. US National Health and Nutrition Examination Surveys (NHANES) says that higher blood pressure was found to be higher BMI.

Second, being overweight cause cancer in the future if you keep eating too much. According to GLOBOCAN project, in 2012 in the United State, about 28,000 of cancer case of men and 72,000 in women were obesity or overweight. Why does overweight affect cancer? The answer is that extra fat in the body have harmful effect to cancer, like producing hormone and revitalize the work of cancer. Erick Espinoza a physical education teacher in a private school in a middle-class neighborhood in Santiago, find the problem that his students eat too much snacks or sugar. The students whose age is 6 to 10 are in the highest overweight and obesity rate in particular countries. He said, child don't bring fruits as snacks, they always bring potato chips, cookies, fizzy drinks, juice or milk high in sugar, and they don't just bring a small package, but sometimes two or three packages or even a big one.

Thirdly, being overweight or obesity cause diabetes, because being obesity stresses insides of individual cells, and also people who are overweight or obesity added pressure on their body, and the ability of adjusting blood sugar level does not work. The cells cannot get enough of the sugar they need. And when sugar levels in the blood become too high, it causes serious damage to nerves and blood vessels in the heart.

II

Obesity rates are high these days in Latin America. First, I researched why Latin American people being obesity very likely. This is the most important part on researching this problem. I got three reasons why they become overweight in latin America.

First, the first reason why they become obesity is to eat high calorie in a meal. According to the survey of total calories in Latin America in 1979, 1989, 1999, The total calorie per day in Mexico and Brazil rose to 200 kcal in 20 years. This means that the total calorie in Latin America is increasing year by years. As reported by Doak et al. (2000), urban residence and income are involved, so if underweight kid is living with one or more overweight adults, the possibility that becoming obesity is increased. The household food has a significant effect to the body. You could see the obesity people in Japan, and just take a look at their parents, and you could understand what I mentioned.

Second reason is low consciousness against obesity problem in latin America. They don't mind if their body is overweight, because they don't know how obese affect to the body. Sales of Ultra-processed food grew by 48% between 2000 to 2013. It definitely causes obesity problem. They don't understand what is the matter of being overweight. Obesity would be able to glow disease in the body, and people are killed over 2.8 million people every year. The obesity problem brings a big social challenge to the countries in Latin America, said Florencia Vasta, a specialist at the Global Alliance for Improved Nutrition. We have to consider the obesity as disease, and we have to decrease.

Eating too much and moving too little. That's it. Why do they eat too much? The reason is stress. Stress with a friend, job, families, any relationship can cause their obesity, the stress have negative affect mentally and people become overeating because of much of stress. This reason is not only in Latin America. You can see this reason all over the world. hat can we do for solving this problem? I would like to suggest three solutions of this overweight problem. You may have heard that stress could affect our body in many ways in which stress can contribute to weight in, and our waistline would become the victim of stress. When we are under stress, fight or flight response occur in

our body. Our bodies respond like protecting our lives, and we use bursts of energy, if you remain this condition, our health become t risk, nd aside from many dangers, Chronic stress can also cause weight in sometimes create much more stress, , chronic can contribute to weight gain in several ways,

III

First, their goal is to get kids to eat healthier food, not fast-food, and the fast-food Shops also tackle this problem, for example, McDonald's has a meal for kids, it's called happy set. It's meals with toys, so kids order this meal because of toys. If they change the healthier foods from fried potato, that can prevent children from being obesity. People don't realize have obesity problems affect to the body of children in the future, and stop eating too much calories food every day.

Second solution is to make a law to decrease the food which included high sugar and fat. In the past five years, no fewer than 13 countries announced they put a tax on unhealthy food, for example, junk food or soda. Will it work? There are precedents. In Australia, they raise a cost of sigarett, the number if smoking has gone down. Mexico's sale of unhealthy food has gone down after they put 8% tax on unhealthy food. compared with no change in sales of untaxed foods. The purpose of this law is to suppress a number of people who always buy a high calorie food, and also the government need to give the subsidy to the healthy food for children.

If they are in low-income class, they don't buy a expensive food, and also it can change their consciousness. I think they better decrease a obesity people in low-income family at first. It was shown that lower income is associated with higher risks of obesity. However, the perspective of a potential reverse causality is often neglected, in which obesity is considered a cause for lower income, when obese people drift into lower-income jobs due to labour–market discrimination and public stigmatisation. This review was performed to explore the direction of the relation between income and obesity by specifically assessing the importance of social causation and reverse causality.

Last solution is to recommend from government to move the body in weekend or vacation. In more detail, to build gym or place that can exercise. If there is the gym near their house, they can move body every day, and can reduce the weight if they eat too much. Exercise can also be a meaningful tool to reduce blood glucose levels. When we use our muscle in exercise, the need more fuel to exercise. Glucose is taken in from the bloodstream while a simultaneous rise in the liver glucose production keep the muscles supplied with fuel. However, when type 2 diabetes is present, the liver may not match the muscle's need for glucose, which means the moderate exercise would be able to decrease glucose level, Thus, exercise is widely prescribed to treat patients with diabetes. This solution can change lifestyle and get the body shape exactly they want. It's not easy solution, because it's too difficult to change people's mind soon, and government have to put a lot of money on this project, but if they don't do this, the obesity rate in Latin America will be higher than now. They need to cherish the connection between government and them.

IV

In conclusion, the overweight problem has become a serious problem in Latin America in recent years, because they eat too high calorie foods without noticing the risk of being overweight. If people don't try to lose weight., most of people don't realize a obesity as a disease, but obese is a disease, and also this is associated with death, so each country in Latin America must tackle this problem as soon as possible to decrease people who are overweight, that's why I think the governments need to put higher tax on the unhealthy food. I'm sure this problem can't be solved easily, because it's not easy to change people's mind, but of course, it's not impossible, but we have a hope in this problem. I mean a new generation's children. They can solve this problem in the future if they are taken a right education in the school. I believe people will understand that obesity cause a serious disease in their body, we can't let misunderstanding spread into the world. Nothing in life is as important as healthy. We all need to keep in shape every day.

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Greenhouse Gases Sota Kambara

Many chemical compounds present in Earth's atmosphere behave as 'greenhouse gases'. These are gases which allow direct sunlight (relative shortwave energy) to reach the Earth's surface unimpeded. As the shortwave energy (that in the visible and ultraviolet portion of the spectra) heats the surface, longer-wave (infrared) energy (heat) is reradiated to the atmosphere. By the way, fossil fuels like coal, oil and natural gas have become an integral part of our life. On the other hand, some issue of greenhouse gases that is gaining global attention The first essay I will write 3 Causes of greenhouse gases in the world. It will be a Division/Classification Essay. According to JCCCA, there are 33 billion tons of carbon dioxide emissions in the world in 2014. This figure is about twice the 1971 emissions. In this essay, I will explain three causes of greenhouse gases emission including fossil fuel, deforestation, and industry to determine if the negative effects can be avoided.

I

One of the largest causes would be the excessive burning of fossil fuels. Fossil fuels are mostly used to make electricity. With the increase in the population, the required power has also increased and this has resulted in increased greenhouse gases in the atmosphere. CO₂ emissions are high because we still depend on coal for electricity. These two factors account for most of the causes of greenhouse gases. The second largest causes would be deforestation. Forests hold a major green area on the Earth. Plants and trees intake carbon dioxide and release oxygen, through the process of photosynthesis, which is required by humans and animals to survive. Cutting down of trees, thus, leads to an increase in the carbon dioxide level in the atmosphere, eventually enhancing the greenhouse effect. The third largest causes of greenhouse gases emissions are our houses. In recent years, with the spread of various electric products, more power is required. Residential buildings require heat as well as electricity for the increasing numbers of electrical devices used in homes, such as air conditioners and appliances. A large amount of greenhouse gas is released from air conditioners and appliances.

II

There are many negative effects of burning of fossils that will be very difficult to avoid. I think it is impossible to avoid the use of fossil fuels at this time. Renewable energy has spread but the reality is that human beings are still dependent on fossil fuels. I think we need to spread renewable energy to more countries. And also need to create new alternate technology system. The government will need to increase research funding for new technology. In the world, it affects the lives of various people by the influence of greenhouse gas. In this essay, I will explain three effects of greenhouse gases emission including ocean acidification, smog and ozone pollution and the ozone layer. The first effect would be ocean acidification. Increases in carbon dioxide levels have made the world's oceans 30% more acidic since the Industrial Revolution. The ocean has the ability to absorb carbon dioxide and discharge acidity. And the ocean absorbs a quarter of the carbon dioxide. So as the level of carbon dioxide in the atmosphere rises, the acidification of the oceans increases. And due to the collapse of seawater and freshwater ecosystems by ocean acidification, there is a possibility of various service losses. The second effect would be smog and ozone pollution. Over the last century, global background ozone concentrations have become 2 times larger due to increases in methane and nitrogen oxides caused by human emissions. The causative substance of photochemical smog is nitrogen oxide and nitrogen dioxide of nitrogen dioxide contained in smoke released from vehicle exhaust gas and promotion. These substances of a pollution which is also a cause of acid rain and global warming which is a problem in the world. At ground level, ozone is an air pollutant that is a major component of smog which is dangerous for both humans and plants. And also, food shortages and food security problems may occur due to temperature rise and drought. The third effect would be Nitrous oxide. Nitrous oxide damages the ozone layer and is now the most important ozone-depleting substance and the largest cause of ozone layer depletion. This is because CFCs and many other gases that are harmful to the ozone layer were banned by the Montreal Protocol (MP) which has reduced their atmospheric concentration. Nitrous oxide is not restricted by the MP, so while the levels of other ozone-depleting substances are declining, nitrous oxide levels are continuing to grow. If the ozone layer is destroyed, creatures cannot survive with various rays from the sun. The possibility of death or disease caused by heat waves comes out. In conclusion, there are three major effects of greenhouse gas effect in the world. There are many negative effects from Ozone depleting substances, etc that will be very difficult to avoid. Since the current temperature rise caused by greenhouse gases is occurring in a very short period of time, it is considered that many wildlife cannot keep up with the change in the environment and are likely to be reduced or extinct. Now we should stop ozone destruction and ocean acidification aiming at reducing nitrous oxide. In our lives, which uses a lot of electricity and cars, we consume a large amount of fossil fuel as an energy source and directly and indirectly emit a large number of

greenhouse gases. In order to reduce emissions of greenhouse gases in such a situation, we can revitalize our daily lives and reduce greenhouse gas emissions by trying to reduce energy consumption.

III

Then, I will explain three solutions of greenhouse gases emission including Air Conditioning, Energy-Efficient Products, and public transportation. The first solution of greenhouse gases emission would be using less heat and air conditioning. Adding insulation to your walls can lower your heating costs more than 25 percent, by reducing the amount of energy you need to heat and cool your home. By changing the set temperature two degrees in winter or summer it is possible to reduce about 900 kg per year worldwide. So, we do not lower the temperature of the cooling too much or raise the heating temperature too much, we have to adjust to comfortable sensible temperature by adjusting the dress and the number of clothes to wear. The second solution of greenhouse gases emission would buy Energy-Efficient products. As you know, home appliances now come in a range of energy-efficient models, and compact fluorescent bulbs are designed to provide more natural-looking light while using far less energy than standard light bulbs. When purchasing electrical products, it is good to use such energy saving type products. The third solution of greenhouse gases emission would use public transportation such as a bus. Utilization of private cars causes emission of carbon dioxide and nitrogen oxides from causes of congestion and from each car. When moving, we need to try to use public transportation such as buses and trains whenever possible.

IV

In conclusion, there are three major solutions of greenhouse gas effect in the world. There are many negative effects of the increase in power consumption per family that will be very difficult to avoid. To solve this issue, I suggest that use Less Heat and Air Conditioning adding insulation to your walls and installing weather stripping or caulking around doors and windows can lower your heating costs more than 25 percent, by reducing the amount of energy you need to heat and cool your home. Turn down the heat while you're sleeping at night or away during the day, and keep temperatures moderate at all times. Install a programmable thermostat because setting it just 2 degrees lower in winter and higher in summer could save about 2,000 pounds of carbon dioxide each year. Other solution would be Use the off Switch. This is the easiest one that you can do right now to solve these problems. To Save electricity and reduce global warming by turning off lights when you leave a room, and using only as much light as you need. And remember to turn off your television, stereo and computer when you're not using them. The third solution would plant a Tree. If you have the means to plant a tree, start digging. Trees absorb carbon dioxide and give off oxygen. A single tree will absorb approximately one ton of carbon dioxide during its lifetime. We must urge each of us indirectly to reduce fossil fuel consumption. The accumulation of each individual's action will greatly advance global warming countermeasures.

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Food Loss, Waste, & Apathy

Sumire Kiriya

Lately, the population of the world continues to increase. According to the United Nations, it is projected to increase to 9.7 billion by 2050. Along with the population increase, there is worry about securing future food and water. So, in this essay, I will write about the food problem which is one of the problems in the world has today. This issue is also one of the SDGs 17 goals. It is "to ensure sustainable consumption and production patterns" of SDGs 12. I saw this sustainable consumption and production as a cycle representing food circulation. However, there are still many countries where the cycle is not established in the world, and there are also countries where the movement of the previous cycle may cease even if it is now normal. In other words, it means that food is not supplied steadily. In order to prevent it, one must think about using new sustainable independent cycles, being more self-sufficient, and preventing excessive food waste. Therefore, I advanced this research and thought about a solution by focusing on Japan because Japan has a serious problem with domestic food production.

I

Currently, the food self-sufficiency rate in Japan is only 39%. This is the lowest ranking among developed countries and heavily relies on imported food from abroad. That is why we are able to live without trouble with food. In other words, if Japanese importing partners stop trade with Japan, Japan's food consumption would be cut off. However, export restrictions on agricultural products are being conducted around the world now. Since 2012, regulations have been imposed in countries such as Nepal, Kyrgyzstan, Kenya, Nigeria, Iran and other countries that produce wheat and corn. Also, in recent years, since the president switched from Obama to Trump, politics became conservative and began to exert high tariffs on products exported. Japan is also affected. Despite Japan being in such a stable political situation, Japan has a big problem of "food loss". Food loss refers to food that is thrown away, but still able to be eaten. It is estimated that about 5 to 10% of the food resources targeted for edible food in Japan is categorized as food loss. Mainly, that is when they leftover food at restaurants or house disposal of food that has expired at home. Among the annual amounts of food waste generated from food-related businesses, the proportion of products or products that have been discarded due to unsold items (past the sell-by date) or returned goods was 11% (excluding eating out in 3 industries) was Approximately 940,000 tons in 2006. The food manufacturing industry accounts for 5%, the food wholesale industry 15%, and the food retailing industry 22%. On the other hand, according to the example of the amount of kitchen main waste from households in 2002, 55.5% of cooking waste, 27.7% of cooking scrap, 11.1% of untouched food and the plastic bag, moisture is 5.7%. As can be seen from this result, about 40% of the discarded foods could still be eaten. Japan was one of the highest amount of wasted food in the world. It is about 6.3 million tons annually in Japan, and also this number is almost twice as much as the amount for world food aid. In this way, despite importing a large amount of limited food, Japan wastes a lot of food. In other words, Japan has two problems excessive import of food products and food loss.

II

The fundamental reason why Japan has fallen into over-importation is because of the low food self-sufficiency rate in Japan. One of the causes is a change in food culture. In 1955, Japan's food self-sufficiency rate was 73%. At that time, the Japanese diet consisted of a lot of fish and vegetables, mainly on rice which was the staple food. However, due to the distribution of bread and milk by the GHQ after the war and globalization through the economic development of society, the Japanese diet changed eating rapidly advanced. Therefore, the amount of rice to eat that can be made in Japan is reduced, and meat, livestock products such as dairy products, eggs, fats, oils have become staple foods. Not only that, furthermore, the "reduction policy" which was introduced in earnest in 1971 is also one of the major reasons for lowering the production of rice in Japan. In fact, it is completely abolished in 2018. This policy is a production adjustment policy to curb the production of rice which became excessive production. The country made adjustments by allocating production target amounts to farmers through local governments and providing subsidies for conversion support. Instructed farmers to reduce rice planting area and cultivated wheat and soybeans instead of rice. Since raw materials for livestock feeds and oils and fats cannot be made in large quantities in Japan, so it has become necessary to import. Also, imported goods are cheaper than made in Japanese foods, so many people came to choose imported foods than Japanese, food self-sufficiency rate fell. Other causes are industrialization in Japan and declining birth rate and ageing population. With the progress of industrialization in Japan, young people began to go to the city, migrant workers also increased, so the number of workers engaged in agriculture and fishing decreased. Not only that but also many industrial companies made plenty of buildings and factories on a large land, so the land to cultivate fields and rice field decreased. As a result of this, Japan's self-sufficiency rate has gradually

declined since Japanese society became globalized. And the big cause of food loss is setting premature food expiration date and expiry date which are too early. The food expiration date indicates the final date and time of the period for which the manufacturer maintains all the quality such as safety, taste and flavour, in a steady state while keeping the packaged state of food with relatively slow deterioration. Since quality is more important than sanitary aspect, so "food's expiration date" is described in processed food that can be stored hygienically for a long period of time. Furthermore, "expiry date" is to be stated for food items whose quality is declined within about 5 days including the date of manufacture. In other words, the food expiration date has no harm to the health condition even if it expires. However, many consumers and merchandisers selling goods became sensitive to the display of the deadline, and it became a habit to throw away goods with expiration date and near the due date. This custom is called "one-third rule", and as a result, many foods have been discarded. Up to now, there was no clear criterion on the expiration date, it was left to each food maker, but the Consumer Affairs Agency decided on a policy to set a unified guideline on how to set the expiration date for each food item. And in 2014, cup noodles grew from 5 months to 6 months, bag noodles were changed from 6 months to 8 months, other drinks, etc., after reviewing the safety aspects, the expiration date the movements of manufacturers that extend the range also became visible. However, no matter how long the food dealer extends the food deadline, if the consumer does not buy it, it will eventually remain unsold and be discarded. In fact, consumers tend not to buy products whose food expiration dates and expiry date are close. In addition, 11.1% of the food waste discarded by hand from households is said to be caused by consumer's too much purchase.

III

From these explanations, Japan was a large amount of food waste due to the food's expiration date being too early, sanitary standard regarding consumer's food, and hoarding. In this chapter, we present the efforts actually being undertaken and that effect and what to do in the future. First of all, we will explain the efforts that producers are doing. At the Tokyo Imperial Hotel in Tokyo, the Environment Committee has been inaugurated since 2001, and the entire company began working on environmental activities. The Environment Committee is a committee of the Imperial Hotel chaired by the president, and is held every spring and autumn. Under the Environment Committee, there are three subcommittees, the Green Team, the Energy Conservation Team and the Phoenix (Waste Management Team). Each team promotes concrete activities, they recycle wasted food into fertilizer for growly vegetables that they then feed to their employees at their cafeteria. Japanese government should emulate the environment of the Tokyo Imperial Hotels. This contributes to the reduction of carbon dioxide emitted when being discarded. If such cycles are expanded and done throughout the country, it will be possible to save a lot of food. Because it makes it possible to produce foods themselves from fertilizer made from discarded food. In other words, you do not need to import it from over the sea. Next, an activity which several supermarkets do is to cut the prices of food that are close to the food expiration date and expiry date. Furthermore, those food products are distributed freely to homeless people or children who have economical disadvantages to get healthy food. There is also a movement in Japan to spread the "doggy bag system" which is mainly done in the US. Doggy bags refer to a system in which people can bring home the foodstuff remaining at a restaurant. This activity originally began in the United States when restaurants let dogs eat excess surplus foodstuffs. From that point on, the customers themselves eventually took home their leftovers from restaurants. Other activities include the food drive. This activity has been actively conducted in the United States since the 1960 's. People bring food that is left at home to schools and workplaces and donate them to local welfare organizations, facilities, and food banks. Food drives are voluntary activities of the general public. However, the food that can be donated to this activity is limited, and foods without the expiration date excluding rice, foods with food expiration date, or foods with damages packages cannot be donated. When donating vegetables and fruits, people must add the name of the specific vegetables and fruits. This activity began in Japan in 2002 and food handling volume was 30 tons, but it increased to 813 tons in 2010. In 2011, due to the impact of the Great East Japan Earthquake, it was 1,689 tons, doubling from the previous year. Replacing the figures for fiscal 2011 with welfare contribution degree reached 1.10 billion yen, and these huge expenses were prevented by food banks. However, these innovative activities are not disseminated because the providers are afraid that the reputation of the shops will decline if there is damage to the health of the consumer as a result of ingesting expired food. Furthermore, consumers typically choose fresh food by the simple desire of wanting to eat fresh food. Therefore, I think people should tell consumers how much more detail about the food expiration date and expiry date can be eaten rather than fresh. In addition, I think from that action try to make more disseminated these innovative activities.

IV

In conclusion, accessibility of nutritious food is getting more equally dispersed in the world. However, the world continues to have a gap between a developed country and developing countries. Developed countries have surplus amounts of nutritious food despite developing countries not having enough food of the same quality. The large

amount of food loss in developed countries is a serious problem. People always think about various solutions, but there is no current solution that has had tremendous impact in all countries. This issue is ongoing and is connected to the food crisis problem in SDG 12. The world population continues to increase, and by 2050, it will require a much larger amount of food productivity and dispersal. This issue will become more difficult in the future as the number of people in poverty-stricken areas continues to increase. People need to think about how to solve this problem. It requires a global perspective and a local understanding of each given party. It is strongly advisable that governments need to take more action domestically before they rely on market trends in commodities and globalized trading.

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School Meals Yukino Kishimoto

In Japan, we usually can have school meals at elementary schools. However, there are differences of school meals' system, menus, fees and nutrition between Japan and other countries. These days, 368 million children, about 1 in 5, receive at least one meal at school per day, but those school programs are weakest in countries where they are most needed. Also, it is said that there are a lot of children who can't afford to have school meals or school lunch is the only way to get their nutrition. Providing healthy food and snacks in schools improves students' health and nutritional well-being, enabling them to grow well and learn well, so school feeding program is very important especially in the elementary schools. According to World Food Program, 66 million of children in the world go to school regardless they are hungry.

I

First off, I will compare the programs, menus, and fees of school lunch with three regions, Japan, Canada and developing countries to show how different they are. To begin with, I'm going to compare with school meals programs. Japan has a school lunch program which is called Kyushoku and almost all children eat healthy lunch during the lunch time. The meals are a communal experience as students serve their own classmates. It is common around the Japanese primary schools. Lunch time are typically 45 minutes long and kids learn the importance of Kyushoku. In Canada, there is no national school lunch program like Japan. In most cases, children bring simple lunch from their home, but Canadian students can order the Hot lunch once or twice a week, it depends on the schools. It is delivered from shops. In my school in Canada has this program about three times a month. There are some students who order it. School lunch in Africa rely on foreign aid. However, the coverage of these support programs is lowest where they are most needed. Children in poor countries sit on the ground and have their meals with their hands.

In Japan, the school lunches are made of local sources and almost never frozen. The meals are balanced and include a lot of traditional menus such as rice, fish, soups and a bottle of milk. Japanese Kyushoku is considered by nutrition experts carefully, so their meals are good for the kid's bodies and healthy. In Canada, Hot Meals' menus are usually foods that can't say healthy such as pizza or hot dogs. Canadians bring their own lunch from school, and they are like sandwiches, yogurt, fruits, pizza and frozen pasta. It is much more simple than Japanese lunch. We have a box lunch that there are rice and a lot of dishes in it. In developing countries, childrens have only the rice, just the corn paste, beans and avocados or just the soup.

Lastly, I'm going to compare with fees. In Japan, it depends on the areas, but parents pay about \$2.50 per one meal. However, if parents can't afford to pay \$2.50, there are the system to let their children get their lunch for free. In Canada, there is no system of school meal, so there is no accurate number of cost. In the developing countries, they can get the school lunches by supporting by WFP and other countries, so children can have them for free, but it's not enough for them.

Therefore, in some countries, the school meals are nutritious and well-balanced, so children can get enough nutrition and understand deeply about the nutrition and importance of foods. On the other hand, some countries barely satisfy basic nutrition standards. Children are not able to have enough meals. Furthermore, there are a bunch of little children who can't eat enough foods and go to school although they are so hungry. I think this situation is so considerable. Though they can attend to school, that would be just waste of time unless they can't focus on their studying because of hunger.

II

There are many children who can't attend to school in the first place. Before talking about the problem of school meals, there are a lot of children who can't go to school in poor areas. Almost 70 million children can't receive the proper education in the world, because children have to work for their home, they are poor, there is school far away and there are too few teachers and education materials. Girls have more deep problems such as child marriage and poor sanitation. In most developing countries, public school is not free. The costs of books, uniforms, and teachers' salaries are generated from the students' families. Schools don't have enough money to manage themselves, so of course they can't provide students' meals.

Secondly, there is not good environment for agriculture and the infrastructure is not ready. Even if children can attend school, why they are not provided school meals where the school meal is the most need. 21 million people are living in dry areas of Asia, West Asia and Northern Africa around the world. 10 billion of them are living under the severe conditions of drought and desertification. Most of them rely on natural resources, so they make a living by farming with using rainwater. Drought is threat of them because if it happens, they can't get any water. Furthermore, in the world, people who engage in agriculture is decreasing nowadays. However, in developing countries such as Africa and Asia, 50% or more people are engaging in farming. In those countries, the facilities for agriculture is not

enough and agriculture mechanization is not increasing. In addition, if they can produce well crops, there is not good infrastructures in those areas, so they can't send them to school. Also, if they can, they are not fresh. Indeed, recent report says that only 40% of Africans are supplied a reliable electricity.

Thirdly, the provision to make the school meals at schools is not in good condition. In the developing countries, schools don't have kitchens to make school meals for students. They don't have even enough classroom, desks, chairs, education materials and sanitation for children. In Japan, they have great kitchen, nutritionists and cooks at schools. However, in the poor areas, it's not usual, because a lack of teachers is really big problem of schools. Also, children who can get school meals eat them sitting on the floor. Environment for school foods are not good in those countries.

III

To sum up, the first reason why there are gaps between the countries that can supply the school meals and the countries can't be there are a lot of children who can't go to school and receive proper education. Second, they can't do well agriculture because of environment, and the infrastructures are not in the good conditions. Thirdly, schools' facility is bad in the developing countries, and there are a few workers even a lack of teachers is the problem. These are the major causes. Firstly, it is essential to make an environment that all children can go to school and study. If a lot more children could have received proper education, the world would become much better. To make this happen, it is needed to expand the number of schools in developing countries and teachers. We can send workforce from the countries which they are enough. In addition, preserving children from any kinds of disease is also necessary. Second, the people in poor countries should be taught how to produce good stuffs and deal with the bad conditions such as natural disasters. Furthermore, consolidation of infrastructures is important. Even if they have resources, they don't have skills to construct them. That's the problem. So, making the road and some transportations to deport foods or crops to schools. Thirdly, schools should be completed with kitchens and cafeteria. Students have to eat lunch with a clean environment. If it's dirty or messy, that doesn't sound healthy. Also, they need the nutritionists as Japanese elementary schools have to make and decide the menus which has advantage for children's growth. Therefore, there are still a bunch of children who can't receive school meals in all over the world. Almost all of them can't go to school. Other reasons why in those areas are they can't produce good crops because of a lack of infrastructures and school's facilities systems are so poor. These issues can't be solved by short term support. It should be sustainable support.

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Poverty in the Philippines

Yuuri Miyagaki

I went to the Philippines on a field trip in the summer of 2017. As reported by Philippine Statistics Authority, poverty incidences declined from 26.6% to 21.6% between 2006 and 2015. Nonetheless, roughly one in five Filipinos were poor and the number of people was about 22 million in 2015. The poverty is still a serious problem in the Philippines. In this essay, I will describe 3 current situations involving girls home, elderly people's house and Smokey Mountain to determine whether the poverty can be solved. Poverty is a worldwide problem, especially it is very grave in the Philippines. According to Philippine Statistics Authority, subsistence incidence among Filipino had declined from 10.4% to 8.1 percent between 2012 and 2015 though poverty incidence had fell in the same period. In this essay, I will explain three causes of poverty in the Philippines, including an employment system, an education gap and the impact of disasters to decide if these causes can be improved. So far, I discussed the serious current situations and the causes of poverty in the Philippines, and its seriousness is still not changed. The poverty incidence is different among basic sectors. They are classified into farmers, fishermen, children, self-employed and unpaid family workers, women, youth, migrant and formal sector workers, senior citizens, and individuals living in urban areas. According to Philippines Statistics Authority, 5 of the 9 sectors had higher proportion of poverty than the general population. Especially the percentage of it by farmers, fishermen and children was over 30 percent compared to about 10 percent by wealthy sectors in 2015. In this essay, I will discuss 3 solutions for the poverty including creating more jobs, raise the minimum income and establishing proper systems for developing in the Philippines in order to decide whether this grave problem can be resolved.

I

To begin with, Girls' Home is the institution that the only girls who cannot live with their families live together, and there are a lot of girls there. Some of them can go to school in the morning or afternoon based on support and in the Philippines and as reported by UNESCO, the figure of girls who cannot go to school had decreased at roughly six hundred thousand people to approximately one hundred thousand people between 2007 to 2013. The main reasons why they aren't able to spend their time with their parents are because of natural disasters and abuse. I talked with two girls called Saliha and Cielo. They were eleven years and twelve years respectively but when I met them for the first time, I thought they were seven or eight years because they were smaller than ordinary girls aged eleven years old due to malnutrition. We had lunch including rice, fried chickens and juices supplied to them. However, Saliha ate just a crispy coating and had juice though she was hungry in order to keep them in her locker. She was going to eat the rice and the chicken afterwards with friends who could not participate in interaction with us because of illness and mental aberration. Thus, the number of food is not enough and very precious in Girls' Home. Moreover, for children, the families, especially the existence of mothers are very important for developing, but the girls have to live without them, so it is impossible to be taken care of by them with great love. Saliha asked me, "Where is your mum?" At first, I could not understand why she asked me such as a question but I thought she was sensitive about mothers. Thus, the situation which stuff is scarce and to live there away from their parents is one of the features of poverty.

Secondly, the elderly home we visited Elderly Home where we came to was the 50th anniversary and there is a serious problem which elderly people are poor and lonely has persisted for at least 50 years. There are roughly four hundred people and like orphans in Girl's Home, they do not live with their families and some of them was forced to going there by the Filipino government because they did not have houses to live in. In the Philippines, homeless people is a grave problem. According to Global Homeless Cup Foundation, in 2014 Manila had the largest homeless population in the world, which was about three million. I saw a lot of them during a field trip and they were lying on the road. Some of them were sleeping in hammocks which they lashed. Like this, the people who can live in Elderly Home is just a mere part. In addition, an old woman told me that her family do not know that she is there. We interacted with the elderly people who have not ever committed crimes before but some people had criminal records so they compelled to be outdoors to prevent communicating with us because they were mentally unstable. Most of the elderly spoke Tagalog, not English. In Elderly Home, the figure of medicines for the elderly people who are ill wasn't enough. The same can be said of food. The most surprising thing was that when I distributed some Japanese snacks and sweets to old people, a group hid them in their pockets and pestered me for the more snacks and sweets though they had already had them. Also, the elderly people who didn't be allowed interacting with us reached out their hands for us to get the snacks and the sweets from the outside. Hence, people cannot get basic needs including food and live stables lives even if they are in Elderly Home.

Finally, in Manila, a slum called Smokey Mountain exists. This name is derived from a state that smoke rises because of spontaneous combustion of rubbish. A large amount of refuse surrounds but there are a lot of inhabitants in Smokey Mountain. They live by collecting and selling the refuse, and their houses were made of rubbish and wood.

The houses appeared unstable, so when natural disasters including earthquakes occur, they evacuate from there to nearby churches. I walked around there and encountered a shocking scene. There were two boys and to my surprise, they were in the river which was full of the refuse. They were swimming and going on handmade polystyrene boats. They looked happy as if they were swimming in the sea though they were collecting the rubbish which may be able to be used for their lives in the river. Then, an old woman who seems a member of their family was keeping an eye them from their house which is on the river. I saw the horrible sight from on the bridge and could not believe that they spend their time in such a place every day. However, though people are poor and cannot afford to buy anything, most of them are large families. For example, there were many children in the family whom I payed attention and some boys were naked. There are multiple reasons why poor people living areas such as Smokey Mountain have so many children. One reason is that Filipinos love the families. I heard this information from a student in the Philippines when I had visited another poor area as talaban which is an activity to reach out to help the poor. Even if they have no money, the existences of the families are essential. Another reason is for more labour force. The children work and the more children there are, the more chances to earn money the families can get. The most common reason is related to a strong Catholic culture. According to Catholic Hierarchy, the percentage of catholic population was approximately 80 percent in 2005. Many people still have it and Catholic culture prohibits birth control so people cannot have access to it. Many poor people cannot choose when to have children. As the result, it causes the larger number of them like I saw in Smokey Mountain. Therefore, they support, care and cooperate with each other to live, and people's lives in Smokey Mountain were beyond my imagination.

II

One of the major causes of poverty in the Philippines is an employment system. The Philippines was once Spanish colony but on 12nd of the June 1898, it declared independence. However, after that, the United States of America colonized the Philippines so the impact is still felt today. Therefore, the Philippines is a capitalist country and an employer and an employee exist in many workplaces. Philippine Statistics Authority said employment rate was estimated at roughly 95 percent in 2017. According to Kittelson & Carpo Consulting, there are various types of employment in the country. For example, seasonal employment and term or fixed employment. First, the seasonal employment is that people are employed for the duration of the season because work or services are seasonable. In other words, the employee cannot have any jobs in the workplace by the season in the Philippines. Next, term or fixed employment means that the period of employment is limited by the employer. Workers' contracts will expire so they work and get salaries within a given period time. Like this, the short-term employment is very usual in the Philippines and even if people can get jobs, some people lose the opportunity to earn money immediately. Thus, it is difficult for them to lead stable lives. Moreover, there is a system of probationary employment. It is that the employ observes and evaluates the employee's ability, skill, appropriate attitude and development and ascertains if he or she is qualified for regular employee. Then, the people who does not measure up to the job cannot be full-time worker because they are incompetent.

Another cause related to the poverty in the Philippines is the education gap. United Nations Educational Scientific and Cultural Organization said that the number of out-school boy had declined from about 1,600 thousand people to roughly 500 thousand people between 2007 and 2013. Likewise, the figure of the girls had rose from approximately 700 thousand people to 100 thousand people in the same period therefore the opportunity to receive education was improving. However, there are still a lot of children who are not able to go to school in the Philippines and the education gap causes a serious problem. According to Philippines MDGs report executive summary, more than four fifths of the workers who could not go to any school are working in the agriculture sector therefore people with lower education tend to belong to the sector more. In general, people who work in the service sector can get more money than the workers in the agriculture sector so it is impossible for them to improve their live. Thus, it can be said that employability relates to the education so the poorer people are, the worse their abilities to work as a common reason.

Finally, the third major cause is the impact of disasters which occurred in the Philippines. Philippines MDGs report executive summary told that the Philippines is the third most country which is prone to occur disasters in the world. Also, as reported by the Citizens Disaster Response Center, in 2012, a total of 471 disasters including natural and human-induced were reported in the Philippines and about 1.600 lives are lost. Furthermore, they influenced approximately 12 million people and caused economic damages. Also, according to Rappler, Typhoon Yolanda which is one the world's strongest typhoons cause the death of about 6,300 people. Like this, the disaster is very serious and has a big impact. For example, if anyone lose his or her precious family or the house to live in because of the disasters, their lives will be worse and poor. Also, it will cause the increase of people who a home such as Girls Home and Elderly Home. In fact, when I went to the Elderly Home, I talked with a old woman and she said to me that she had

come there because she had lost her house due to the disaster. Similarly, the girls who I met in Girls Home were compelled to live there because of the disaster. Hence, this problem relates poor lives for people in the Philippines.

III

One of the significant solutions to end poverty is to raise the minimise income. In general, the salary is relatively not high for the public in the Philippines compared with wage that people can earn in developed countries such as Japan or the United States of America. Moreover, As reported by The Philippines Fifth Progress Report Millennium Development Goals, the poorer educational attainment was, the lower average daily wage was. For example, those who could not complete any grade got roughly 150 Pesos though the workers who graduated from colleges earned approximately 600 Pesos in 2011. Thus, the average daily salary by the less educated people was quadrupled as the daily wage of one who had a college degree. Thus, as you know, education is linked to the choice of jobs and it should be improved for poor people. However, it will be very hard to improve the education system in the Philippines now because this includes more problems that should be dealt with such as building conditions and equipment for the education, not just the improvement of curriculum. Therefore increasing the minimise salary for poor people is easier way to tackle the poverty problem because earning much money might make them wealthy as soon as possible. Many people believe that money is the most important in order to solve the poverty and for example, if the incomes that people who work in the sectors such as agriculture can get is risen, the wage gap between those who do not have enough educational achievement and highly educated people will be closed.

Next, the second solution is to create more jobs in the Philippines. The Philippines Fifth Progress Report Millennium Development Goals stated that the rate of unemployment had declined at about 7.0 percent in 2013 from 8.0 percent in 2006. It is associated with the good result of poverty incidence, which went down in the same period. Nevertheless, a lot of people are still suffering from their poor lives and there are people who are not able to get any occupation even if they wish. Without jobs, people are very difficult to earn their livelihood and they are an indispensable part of their lives. Hence, going up the number of jobs is essential pathway to the resolution of poverty. The Philippines Government might consider investing in the strategies to create jobs. For instance, developing renewable energy sources like solar energy, hydropower, biomass energy and wind energy, rebuilding the infrastructure and stimulating national economy. The improvements of these points will help the Philippines Government to create more jobs easily and make the environment better for everyone living in the Philippines. Also, building on proven models of subsidized employment might be a crucial element in job-creation strategies because it might be helpful for the long-term unemployed workers to enter the labor force again. Therefore, creating jobs will be the effective solution for the whole situation the Philippines has, not only poverty.

Finally, the third solution is to establish proper systems for developing. In the Philippines, old customs and actions are often passed down over generation because a lot of people have values and beliefs based on religions. According to World Population View, religions are extremely affected by the history that the Philippines has as a part of the Spanish Empire. Today, over 80 percent of population are Roman Catholic Christians and approximately 10 percent have other Christianity. Also, around 6 percent of citizens are Muslim. Like this, I can say that almost people believe in religions and also they are free to practice their own religion basically although some people have religions passed down by their families. However, this situation might prevent the Philippines from solving the poverty because new attitudes, rules and habits to make people rich might not be accepted by them due to holding firm faith. New principles are very important in making better country and guide the Philippines toward forming the right decisions for developing more and more. Therefore, the appropriate way to resolve the poverty made by the right decisions will show the clear future. Admittedly, religions have a good impact on making traditional and cultural things, but they can be an awkward problem in introducing the new systems for growth of the country. Thus, the Philippines Government should come up with more new principles consistently and it will lead to efficient and sustainable handling for the poverty.

IV

In conclusion, there are 3 current situations in the Philippines. All of them which relate to the poverty are very hard to solve and a lot of people live poorly at this point in time. I believe that to resolve poverty in the Philippines is difficult because new generation is born one after another while these situations are not improving. The Philippine government should consider about the poverty more seriously and acquire the knowledges and skills to improve the country and help such poor people. I think that to refer to developed countries which are prospering is necessary because some old customs are inherited in the Philippines. To have tradition is important. However, for example, the strong Catholic culture has a big impact on the poverty badly. Furthermore, the understanding about the relationship between the customs and severe current situation will need for the poor people. There are three crucial causes of poverty in the Philippines. There are large-scale problems regarding to the Poverty and it is difficult to improve

immediately. I believe that to avoid the three causes is tough and it takes a longer time to improve them. The employment system is accepted among many people, especially employers so it is difficult to remove current system immediately. Also, the Philippines government will not have enough money to improve the education gap. In addition, it is impossible to predict disasters because people do not know when they occur. I think that many people will not notice the three problems which cause the poverty so I believe that they are not solved. To be aware of the causes is essential for people in order to deal with them. Moreover, a lot of poor people will have accepted conventional systems such as employment and education so the Philippines government will need to focus on them to change their minds. Furthermore, nobody knows when the disasters happen but I think that the government will be able to prepare any precaution against them like reinforcement of people's houses in order to prevent them collapsing. There are 3 crucial solutions of poverty in the Philippines. These effective ways might help the country to improve its situation and resolve the poverty problem. I think that the 3 solutions will not be realized without support including funds. The Philippines Government does not have enough money and wealth to implement them yet though it is said that the country is more developing than before. Certainly, the poverty incidence had dropped dramatically, but the Philippines Government should pay attention to many social problems such as Smokey Mountain and acquire the ability and social power to provide the solutions for the poverty situation. I suppose that the Philippines can get funds for a permanent resolution to the poverty by asking other developed countries to cooperate. To have more opportunities to cooperate with them, I also believe that the Philippines have to develop the negotiation skill which is linked to businesses. Without profit, the developed countries will not help. Therefore, by seeking support from the developed countries with the improved business skill, the Philippines might be able to convince them of the seriousness of the poverty and gain economic cooperation.

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Changing the Philippines Yuzuki Kawanaka

One of the United Nations' Sustainable Development Goals includes solving poverty and reducing inequality. Also, the Philippines is one country which has these problems. According to official government statistics for the first semester of 2015, more than 26 million Filipinos have been troubled by poverty and approximately 12 million Filipinos are living in extreme poverty, they are in a situation where it is difficult to just live. The Philippines has some poverty problems including employment and unemployment. According to Philippines statistics authority webpage by Republic of the Philippines, 16.6% of the citizens don't have regular jobs in the Philippines. It means there are only few employers in developing countries, so it is difficult to get suitable and satisfactory jobs. Those poor have relations with unemployment and domestic disaster. In this essay, to improve the Philippines which has these problems, I'd like to disclose problems and causes, and recommend possible solutions.

I

First, I will explain about three types of poverty in the Philippines, including employed poor, unemployed poor and those affected by disasters. One of the problems of poverty in the Philippines is the employed poor. Actually, when I visited the Philippines, I felt inequality of life quality for example the gap between Saint Pedro Poveda College students and homeless so I thought I should consider about how employment affects the quality of life. According to Labor Market Review, generating more jobs is connected to decreasing extreme poverty. The government is putting greater effort into fulfilling it, actually, economic growth in the last 10 years has created new jobs to absorb the growing labor force. However, many people don't have regular jobs yet and still remain unemployed. The Philippine economy has been steadily changing in a favorable way but newly created jobs have some problems and they do not have good conditions. The jobs which were newly created are commonly precarious and low-paying, the people who take them have to work longer hours than general people. It can't satisfy them, they will search for other jobs to change work or have more than one job. As noted above planning is proceeding to improve the current environment, there are drawbacks to be improved in them. These things connect to the high-income households accounted for more than half or 60 percent of the economy's income as measured by the gross domestic product, and other 40% was shared by the bulk or about 84 percent of the country's population.

Another problem of poverty in the Philippines is the unemployed poor. Actually, I saw homeless people sometimes in the Philippines, and every local person didn't react about that. I thought this situation is not normal and needs to improve. A study by a research and advisory firm in 2011 revealed that the Philippines have the widest domestic gap between the rich and poor in under Southeast Asia. According to World Bank, a quarter of the population lives the national poverty line, also it is estimated that around 44% of the urban population live in slums. The capital, Manila has the largest homeless population of any city in the world and it is 3.1 million people. Also, in Manila, there are some families who are homeless. The government provides assistance which gives access to social services, shelter, and economic opportunities to improve their living conditions to street families. To date, there are 4,071 beneficiaries of the Modified Conditional Cash Transfer Program for the Homeless Street Families (MCCT-HSF) compared to the number at large. Then, some people come to Manila to find jobs. However, if you come to Manila, you can only work at the lower level even though if you graduated from school. Also, if you continue to work in the same position, your work level won't change. I think that establishment of low-income and clerical work is linked to unemployed and homeless people.

The third problem of poverty is the effect by disasters. In the Philippines, there are people who do not have jobs. Japan also has the same difference but the Philippines has a bigger difference than Japan. I thought I'd like to search about people affected by how disasters and the background of their life. Actually, a massive fire occurred in Manila on Tuesday 7 February 2017, it continued into the next day as well and Wednesday was broken by this incident. More than 15,000 people were affected by damage, they were bereft of their few worldly possessions and forced to sleep on the Philippine capital's streets. It's the country's slums. Fires in the country's slums are a regular occurrence. About 1,200 families lost their homes in January after a fire in Navotas, a suburb of Manila. Investigators said they believed Tuesday's blaze was caused by faulty electrical wiring or a malfunctioning gas stove. The fire which occurs in slums in the Philippines affects a lot of people who lose their houses and possessions. Then there is another problem that it's really hard and needs long time to recreate houses and city.

II

Then, I would like to talk about the causes related to employment amongst the poor. My opinion which I experienced after field trip is existing life inequality in the Philippines. People cannot get employment which is suitable

for them or only inadequate employment. Actually, there are few people who are satisfied with the contents of their own job. It means there are a lot of underemployed workers. Ideal and required employment is "formal, permanent, well-paid, and offering social protection", however recently the employed who are "temporary, casual, informal, precarious and low-paid, and no social protection" is created one after another. Some service industry and agriculture belong to jobs with those undesirable conditions. Those bad conditions of employment are 54.2% of all surveyed cases in the Philippines. Workers might lose their jobs and become unemployed. It is even more difficult to give young people the ideal conditions for work. Even if you graduated from school, also some lack of ability for getting job like rich knowledge.

In Philippines, it's hard to get a high position work even if you graduated from school and work long time in same company. Harsh labor conditions have given them a choice of unemployment and some people ultimately decide the way of being homeless. In this paragraph, I am going to show "why unemployment is high in the Philippines?" and "what is the cause of homeless". Agriculture occupy the majority of Philippine employment and they get quite low-income. The work and income of people who work in agriculture are depend on the weather conditions, of course, they cannot control it. It is the typhoon that plagues them most and the typhoon create the employment losses. Because of the increase in the unemployment rate, the number of employed Filipinos also got bad effect and decreased. Recently, even elementary school and high school education graduates are unemployed. In this situation, the people who wasn't able to take school education stay in more difficult situation to get work. Also, street children can't change their life, they reproduce homeless and each life will be handed over.

The fires in the countries slums are regular occurrences in the Philippines. More than 1000 families were left without homes in January after a fire. In this paragraph, I'd like to indicate the cause of the disasters which gives effects. Fires in the country's slums are a regular occurrence in shantytowns, Navotas, Parola Compound. Otherwise a lot of people lost their house by it. The biggest cause of fire in slums is faulty electrical wiring or a malfunctioning gas stoves. Actually, I have a example which can testify it. When I visited slum area and ask resident an inadequate point of their life, they demanded that the limited resources such as electricity, water and gas is improved than money. It has a relation with weather. In addition, because of fragile structure, the house in slum burn easily also the alleys between homes were too narrow for fire trucks.

III

Third, I would like to indicate three ways to make a better Philippines, and how should we improve for poor. The first idea to improve the situation is to make new job and work system. When I visited the Philippines, I saw so much garbage which was abandoned on the road and I witnessed the children who collected the garbage of plastic for money. I thought that we should treat it as an official and more large-scale work. Also, environmental improvement is not in place in the Philippines, so I suppose that we should put it action ways to remove the garbage from the road and manage the growth of plants. If we can create a vacant place by that action, it's possible that we can use that area effectively for agriculture. By that agriculture, GDP would increase and also more food could be given to Filipino. About the exchange of products, the mediator or agent are involved in the business which has especially low-income workers that are employed in many cases. I suggest the reason that these workers for this it can't get suitable income thanks to the mediators and agents. If there is a decrease of the number of mediators and agent, and it's possible to do business by as few participants who exchange as possible, their income will be improved and they could be satisfied about income and profit.

The second idea would be to make a system which is has a duty to improve the situation for the bottom of the pyramid. If we can fulfill the above plan, the amount of GDP will go up and it will increase the amount of food which is able to give to the nation. Accordingly, it's important to give enough and suitable profit to the farmers. It should consider the market price. I propose to that introduce new tax system only to the rich. It means setting two kinds of prices, the wealthy people pay a higher price. As you know, the gap of poor and rich is expanding in the Philippines and it's one of the most important domestic problems. If this can introduce, the wealthy people inevitably contribute to poor. I also think that it is a good way to spread domestic equality in the trade system. It is the system which is like setting the valid price to each product, and some of the sales is given to the poor, or give reasonable income for farmers.

Third idea is to create better life environment. In the Philippines, there isn't enough gas, water and electricity which are necessary in our life. People use public toilets because there isn't private toilet in each house in slum areas. Furthermore, the electricity which can use in one day is also limited so people can use as minimum around of electricity as possible, also it often happens that they can't use it when they need to use. These people of slum areas hope that those life environments will be improved. I suggest that the renewable energy needs to be spread and produced. I think that hydroelectric power and waste power generation is suitable for the Philippines. If we can carry out an above paragraph program, the number of farmer will increase. The hydroelectric power generation can be related with

agriculture. The more this program goes well, the more energy and electricity will be produced. As mentioned above, there are so much garbage on the road in the Philippines, so it is good that this garbage is used to create energy. Actually, in Japanese large garbage incineration plants, private power generation is carried out. The more trash, the more energy we can create.

IV

In conclusion, labor and people are surplus, but there is not enough work. Then it is created the employment by inevitable natural disasters and the difficulty in continuing work even if receiving school education produce unemployment. The defective electrical wiring, a malfunctioning gas and weather make the fire-prone situation in addition, the structure of houses is brittle and fragile. To improve those causes and create better country, we need to consider and give more comfortable environment for all citizens. If we can create something missing in the country using what is surplus, it will be a big benefit. So that give a better life for all Filipinos, we should improve something of domestic systems. I suggest the plans that make new jobs and work system, make a system which is involved in duty for poor and create better life environment. My plan is to have relationships between each process and connect to each process. It means my plan became one process. If we suppose a process which have good condition and sustainable, it must connect to development of country.

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Food Additives in the World Natsumi Yoshida

Recently food additives are used in many foods in the world. According to MayoClinic.com, canceling foods with preservatives from the diet can cut the manifestations and severity of asthma. MayoClinic.com analyzed aspartame, sulfites, benzoates and yellow dye No. 5 as conservative that could annoy breathing problems in asthmatics and others, while Medical News Today linked sulphites with annoyance of breath and other breathing problems. The history of food additives is the practice of using food additives spans several centuries. Our distant ancestors likely smoked meat to improve its taste and submerged it into saltwater as a preservative. The food additives have a lot of pros and cons. These days, many foods are using food. Food additives are item like conservative, flavor enhancers and coloring assistant that are added to food. They refill, add to or keep food, help prepare or process the food, make the food look more alluring or absorb the brightness or general quality of the product. So food additives have a lot of pros and cons. These days, food additives are used in many foods in the world. In this thesis, I will write about Benefit and drawback, three effect of food additives in the world, physical effect, Health effect and Growing effect and compare to food additives food and not use food additives food.

I

First, I will write about Physical effect. If eating a lot of high-lipid confectionery, saying "From natural additives", continue the meal with a lot of salt, the condition of the body will be bad and it will be harmful. Actually, although "food additives" are very worried in the media. Some people are eating a lot of food additives don't worried for the physical effects. So, rather than worrying about the harm of food additives, first of all we grasp the state of oneself's healthful condition. One of the harmful effects of conservative in foods is the likely to cause breathing difficulties.

Second, I will write about health effect. A typical American household spends about 90 percent of their food cost on handled foods, and many of food additives has serious importance to our health. Escape or minimizing contamination is an important step against enhancing our health and heavy our risk of disease. Foods, between other things cosmetics and medications, produce a source of these contagion. We may not even know that we are being affected by food additives. Effects of food additives may be actual or may be bad in the long run if we have consistent exposure. Actual effects may include headaches, change in energy level, and convention in mental combination, behavior, or exempt response. Long-term effects may increase our risk of cancer, cardiovascular disease and other backward conditions.

Finally, I will write about growing effect. Another harmful effect of conservative in foods is observable changes, especially in young children. According to the Archives of Disease in Children, in a 2003 double-blind study of 1,873 children the drinking of food additives and conservative led to significant increase in excitable behavior. Removing the conservative or using a placebo didn't lead to these behaviors, which were measured by both fatherly and detached broadcasting. The researchers organize the study noted that whether the children had been already identified as excitable didn't matter in terms of the effects of the conservative and preservative on their behavior. Food additives that are considered to have the most negative impact on children's growth are artificial sweeteners. Since artificial sweeteners are acidic chemical substances, alkaline vitamins and minerals are consumed to neutralize this acidity when entering the body. Especially consumed is calcium, it is said that excessive ingestion of artificial sweetener in the growing season hinders bone growth and causes short stature.

II

Food Additives Lengthen the Life of Foods. These items make it possible to bear foods to far places, grant you to try foods not accessible in your area. Food additives also augment the counter life of food in stores, keeping costs down and abbreviating wastes. Food Additives Can Enrich Foods. You have maybe observed that store-bought applesauce has Vitamin C or ascorbic acid. When vitamins like E and C are used as food additives, they add comestible star value to the food. Foods Become Safer to Eat. A number of food additives absolutely protect foods such as meat and avert it from advance toxins which can result in food corrupt when eaten. Sodium nitrite and sodium nitrate are used to prevent meat from spoiling.

A Lot Of Food Additives Cause Allergic Reactions. Sulfites, usually found in wine and dried fruits, can cause grave hypersensitive answer, especially in those who deteriorate from asthma. Benzoic acid and sodium benzoate are usually used in fruit juices and carbonated drinks. These items can cause beehive and other hypersensitive reactions. BHT (butylated hydroxytoluene) and BHA (butylated hydroxyanisole) that are apply to conserve packaged goods such as cereal, gum and potato chips can also cause allergic answer. Food Additives Can Harmfully Affect Children. Kids are likely to be more conscious to substances than grown-ups and food additives are no omission. Migraines and

headaches in children are again and again associated with the drinking of additives. Consumption Of Food Additives Is Associated With Cancer. CSPI (Center for Science in the Public Interest) states that sodium nitrite and sodium nitrate that are apply to preserve meat can form nitrosamines or cancer-causing chemicals in the body.

III

First, I will write about food additives. Food additives are item added to food to continue or advance its safety, freshness, taste, texture, or arrival. Food additives need to be checked for hidden adverse effects on human health before they can be used. The Joint FAO/WHO Expert board on Food Additives (JECFA), is the international body answerable for evaluating the safety of food additives. Only food additives that have been appraise and deemed safe by JECFA, on the basis of which maximum use levels have been entrenched by the Codex Alimentarius Commission, can be used in foods that are traded universally.

Next, I will write about not using food additives food. The important role of adding color, scent, texture, such as a scenting aroma and a gelling agent that creates a mouthfeel, smooth stabilizer to create are disappears. Fresh foods such as meat and fish do not go on Long-lasting. Foods such as preservatives and bactericides cannot last long. In the case of meat, when it is processed into ham or sausage, it will not be able to keep delicious colors and it will rot.

Finally, I will write about result. Used to keep bubbling during manufacturing, adjust pH, make it easier to separate molds. Antifoaming agent, pH adjusting agent, Release agent. Used to give food texture and unique texture such as tofu, Chinese noodles, margarine, pudding, coagulant for tofu, swelling agent, kanbai, emulsifier, gelling agent, stabilizer. Color is a means of directing deliciousness. Used to color or decolorize. coloring agent, coloring agent, bleaching agent. Used to compensate for loss or reduction of nutrients held by raw materials when cooking or processing. Vitamins, Calcium.

IV

In conclusion, these three food additives effect are bad for the humans. Recently, many foods and snacks are using food additives, so lot of people becoming obesity. I think it is difficult for lose every food additives in the world. The additives used until now are carcinogenic and there are times when it will be prohibited to use. So cancer is increasing in Japanese who love additives. Especially young people. It is said that vegetable intake is reduced from the USA where cancer is decreasing, but in the United States the intake of additives is also less than in Japan. I think that it is difficult to protect yourself from the dangers of food additives. In order to maintain a healthy body, I think that what we can do is to avoid risks to the extent possible according to my lifestyle. The best thing that we can do is to put a draconian cap on the bulk of food additives us absorb. An attentive effort to curtail our disclosures to adverse additives will guarantee a healthy future. We can start by improving our diet through fully audit food labels. There's also the choice of eating fresh crop. We can start a garden to do this. In fact, there are also a lot of food additives that are traditionally used and rooted in the local diet. Food additives are said to be not very good for the body, but it turned out that they are producing delicious food by being used. In my opinion, one who uses too much food additives It is not good for health, but I think it is better than eating dishes that are not rotten or tasty. Not only will we not be able to keep food safe, it will not taste our daily diet. There are also many consumers who do not know that there are cases where substitution with other food additives is made while displaying "no preservative fee".

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Poverty and Christianity

Nonno Uchida

According to GALLUP, 95 % people who is in the poorest countries which average per-capita incomes of \$2,000 or lower said religion is important for their daily life. However, the rich countries which average per-capita income of \$25,000 were 40%. For believer, religion gives big effect and religion is part of their life. Poverty and food problem have big relation. I went to Philippines as field trip for a week in this summer. I saw sad situation it was terrible. I met rich people and poor people but disparity was so huge. I know Japan has same problem like disparity among Japanese people but Philippines' one is too huge. This is the real. This is not fantasy and also it is not fiction. People around me had no religion so it was difficult to understand what is religion and how important it is. However, in Philippines, most people were Christian and I was in Catholic school in Canada. In this thesis, I will write about the relations of poverty and Christianity based on Philippines.

I

First, I will introduce about the real situation of Philippines. According to ABS CBN news, 11.7 % of Filipino families were hunger in 2016. According to Asian Development Bank the percentage of people who were poverty 21.6% in 2015. 2.2% of babies die before their first birthday. Philippines is the Christian country in Asia. According to center for global education, over 90% of Filipino are Christian. 86% of the population believe Roman catholic, 6 percent belong to various nationalized Christian cults, and another 2 percent belong to well over 100 Protestant denominations. The poorest country in the world is Central African Republic and the 51% of people in this country believe Protestantism, 29% belong to Catholicism so 80% is Christian.

According to ADB, the reasons why this country is poor, economic crisis, not sustainable employment, natural disasters, conflicts, failure of developing agriculture high level of population growth and so on. In addition, the These problems are very complicated and difficult to solve all problem. After changing the president, the situation of their life got a little bit better, but still now, there are many homeless people in Philippines. Especially, for farmer, their crops are not sustainable because of weather. Farmer's family can be homeless family easily.

When I joined the taliban in the summer, I visited one Filipino family. The woman had 4 children and she told me that she borned them at her house because hospital is expensive. We cannot say it is good environment for children. Why Filipino people have children even they are poor? The hunger and poverty problems are so complicated. It is hard to raise children because it costs a lot. Food, education, clothes. According to Filipino government survey, the average of household size is 4.6 people. By contrast, Japanese average is 2.4.

II

I want to introduce good effects of Christianity to poor people. According to Pew Research center, about 2.2 billion people believe it. Why so many people believe it? The reason is the teaching. Christian people think that if people believe God, people will be happy because God made us so even they are poor, they are happy. In addition, they believe that after we died, we can go heaven if people do right things. Their thinking is positive and Christianity helps people in mentality for poor people and rich people. Their life is based on the Bible and it is unbelievable to resist God. However, it is the one of good way to spend life happily and makes people happy.

On the other hand, it has serious issues, too. According to Journal of religion and society by Dr, Tom Rees, the people live in strong social safety nets to provide are more likely depend religion on comfort. Also, British Humanist Association warned that government promotion of religion as a positive social influence could mask larger social problems that contribute to poverty, such as a lack of access to education. Religion affects indirectly their life like education, decisions to have kids, marriage, life style. As I mentioned earlier, that makes life happy but in same time, that makes life smaller. Because of being Christian, the choices were limited. For example, they need to go church every Sunday. They cannot love same gender people. For these, their lives are limited because there is a rules the name of Bible.

Lastly, I will talk about cons more deeply. Compassion Australia showed why the poor people have large families. For example, they don't know how to prevent pregnancy and they cannot birth control because of lack of education, they need more labour and use as workforce. One of the reason was religion. Philippines is catholic country. They do not prevent pregnancy even they know how to do it. "God gave us children and people should not control of birth." That is Christian thought. They have same opinion in death, so church prohibit suicide and euthanasia same as contraception, and abortion. Some women earn money by prostitution. Even they have a child by prostitution, they do not use contraceptive. And then, they cannot raise the child and throw away. According to new mandala survey, in 2016, there are 250,000 abandoned children in Philippines. Street children is serious issue, too.

III

First, I want to talk about solution number one. The first solution is stopping believing the religion. I say it is the fastest way to solve the problem. The country which doesn't have religion has progress for poverty. For example, China. It was the developing country but now it is one of the biggest country in the world. According to Gallup International and the WI Network of Market Research, 90% of Chinese people are not religious. If people don't have any religion, they can use their time wisely and they can control their birth controls by themselves, However, it is impossible to take their faith and people have rights that to decide what they believe.

Next, I want to talk about another solution. Government should support christian communities more. If the government pay money more to support poor people, patents don't have to throw away their children. In fact, many of developed countries recognize the separation of Church and State, and also the 1987 constitution of philippines declares, "The separation of Church and State shall be inviolable." Government should treat all religion evenly, but again, over 90% of nations believe Christianity. When I went to Philippine, I felt there are huge disparities among people like income, education, and health. As an example, when we visited Barangay Mauway in Mandaluyong City as talaban with St Pedolo poveda college students, there were bodyguards for students. However, people in Barangay Mauway in Mandaluyong City do not have money to eat enough, go school, and born a baby in hospital. income, education, and health.

IV

In conclusion, this situation cannot say good environment. Christianity sometimes makes people rich mentally but it gives negative effects, too. The faith is human's one of the basic right and no one can control it and should not. "Children are a gift from God," the Christian famous word. However, many children are abandoned by their parents and died by hunger. People should really understand Christianity's good effects and negative effects and cooperate to make good country for everyone. It is impossible to let people stop believing, but in fact, the Christianity is one of the reason of poverty. Government should help them, but it doesn't enough money. The faith of Christianity is we are equal, and Jesus helped many poor people, struggled people. Rich people who are Christian understand that and should help hunger people like Jesus more.

Overseas Edible Flower Market Rin Minami

Edible flowers have a lot of possibility to use for food normally and some people can seem the such future inside of them. As stated by RecipeTips.com, the definition of it is one of the flowering plants and food to use as flavor. Hence edible flowers are not used for main dishes, but by using them, suppers look more beautiful. This is the current style of edible flowers. In this essay, I will describe three pros and cons of edible flowers and causes why still edible flowers are still not known by people living in all over the world to find the best way to sell them as a business.

I

Firstly, I will explain about three benefits of edible flowers, the value of their nutrition, looks, and choosable by season. The most important advantage of edible flowers would be including much enough nutrition because some of them have much more compounds than vegetables. For example, according to Livestrong.com, although most of those flowers provide vitamin C which is good for skin, and both women and men require to take that vitamin 75 milligrams and 90 milligrams per day, respectively. Also, Vineyard Gazette reported as nasturtiums which kind of flowers have 10 times more amount of vitamin C than lettuce. Therefore, edible flowers are good for beauty. Another advantage of edible flowers could be those flower's looks and colour. I edible flower is put on the top of a cake, it will seem beautiful and easy to be accepted to people especially female. Furthermore, the edible flower has various colour variation, so people who use such flower for their dishes can choose and enjoy. The third of edible flowers' benefit would be they are able to choose by season. If it's spring, cherry blossoms called sakura in Japanese and its leaves are able to eat as stated by Nihon Ichiban. Cherry blossoms are known as one of the Japanese beautiful spring flowers and a lot of people will come to see them in April. Moreover, sakura mochi has already been sold and significantly popular in Japan since long time ago; sakura mochi structure would be some of the cherry blossoms are blended with mochi that is a white colour and the mixture will be pink firstly, then it will be covered by a leave of cherry blossom. Similarly, that Japanese desert is famous as well. People are able to enjoy them by season.

On the other hand, edible flowers also have some drawbacks such as taste, danger, and not be able to plant in everywhere. In my first experience of tasting edible flowers, it was too much bitter to eat if there's nothing to eat together. Also, other people who tried that too had the same opinion as me. Thus having with something hides that taste would be good for edible flowers. Moreover, sometimes edible flowers could be dangerous because it's not true to be edible all of flowers. For instance, if a child ate one flower which is poisonous and the child doesn't know about that, edible flowers would have the risk to sell since then. According to LiveStrong.com, there are some kinds of highly-toxic flowers which mean not a good influence for children and their typical type of flowers would be Oleander, Poinsettia, Daffodils, Lily of the Valley, and Foxglove. Their common points are very colourful and attract kids, so those of poisonous flowers make children try to take and eat. Especially, if a child ate Daffodils, unfortunately, parents absolutely should take the child to the Hospital as quickly as possible. Child's life would be in danger. Hence people need to get the correct knowledge to avoid such dangerous situation and before purchasing them. The other con of edible flowers could be that they are having difficulty for planting all of the places in the world. Some of them are not able to grow in the specific hot or cold place. As reported by Livescience and explanation of specific occasion, the Sahara is the top of large desert in the world and more often or not, the average of temperature in Sahara is about 30 degrees and in summer, it will be much higher about 40 degrees. In such case, to grow edible flowers up would be difficult even the desert has a huge area to do that. Furthermore, one of the benefits, season is also possible to think about bad way; edible flowers have limitation by a season.

II

In the latest situation, edible flowers are still not popular in the world. According to Japan Info, there are only four edible flowers that Japanese eat the flowers as a traditional thing or usually. In this second essay, I would like to consider a few causes that is why edible flowers are still not known by many people. I will list three main causes, the less of advertising, the number of edible flower farmers, and difference of culture, and also the other related causes with statistics.

The most valuable cause why edible flowers still aren't known by a lot of people would be the less advertising because informing has a huge power to remind them about something easily. I have searched articles of edible flowers, but it was really difficult to find various information about them though. Most of them presented the same analytics, a kind of flowers that are edible and the quantity of nutrition, how edible flowers are sometimes dangerous, and how to plant them in-house. Therefore, those of situation exactly means that people don't know about the flowers well. The average of how long minutes were each people in the world divided by country watching TV every day in 2016

showed that Europe or developed countries like the United States, Japan, and the United Kingdom watched over 200 minutes overall as stated by Statista. The highest number was the United States, 270 minutes which means about 4.5 hours daily, and about 1.50 billion households around the world had one TV set in 2015. Also, a quarter of a billion people in the world turned the BBC's global news service weekly in 2013. BBC stands for the British Broadcasting Corporation and the company is based on to provide a public service broadcaster such as radio, latest news, and other entertainment contents. This is the oldest organisation which founded in 1922 and largest workers of broadcasting, like over 20 thousand staffs in the world calculated in 2015. According to the Global Audience Estimate, the proportion of audiences of BBC's global news services in each week between 2012 and 2013 was about 250 million people. So this number that about 30 of people in the world are the viewer of BBC broadcasting every day means incredible. During the TV show or radio, audiences will absolutely see a few advertisements. According to the Los Angeles Times, the commercial has distributed about 14 minutes per hour totally in 2013. It's sure that sometimes people want to buy the product that was advertised in the commercial on TV. For example, if a woman saw a new product of cosmetic that was the product wanted for a long time, she must purchase the cosmetic. Although that's able to state in any kind of commercials like game, car, and food, there are not enough advertisements of edible flowers even commercial has a big power to introduce itself to a lot of people. However, nowadays the number of teenagers who watch TV usually is decreasing, in detail, according to the Guardian and the cause would be the proportion of electronic devices. Children are using smartphones as usual now and they use video apps like Netflix and Youtube. The line graph showed that the average of people who watched TV program divided by their age in 2010 as reported by Ofcom. The line of people who aged over 65 years old went up insignificantly and the other lines of people who aged under 24 years old went down dramatically from 2010 and it still continues. Therefore, it could be inferred that if the organisation of electronic devices sector didn't improve this problem, the line would maintain to decline ever. In brief, one of the cause would be the less of advertising of edible flowers and the new problem to solve this cause could be the less of viewers especially children because these kids will manage the world in the future and if the problem didn't solve, the television would disappear.

Another one of the problems could be the proportion of people who are farming and selling edible flowers out as their main job. If there are not enough farmers to plant those flowers, there won't be enough people to tell how edible flowers are good to add in one of the usual ingredients for dishes to other people although that's similar opinion to the previous paragraph. Basically, agriculture is expected that to help to reduce the worldwide poverty, and also improvement of the food sector by the World Bank. This organisation has two goals to achieve which are to finish the poverty and betterment of shared prosperity. What's more, it has 5 institutions, the International Bank for Reconstruction and Development (IBRD), the International Development Association (IDA), the International Finance Corporation (IFC), the Multilateral Investment Guarantee Agency (MIGA), and the International Centre for settlement of Investment Disputes (ICSID). From these five institutions, the one World Bank group is made and it aims developing countries by funding and knowledge. According to such the World Bank, the population of agriculture employment around the world is continuing to decrease considerably from 1998 to now, 2017. To increase the number of people who are farmers would also be a new problem to solve in this essay. Furthermore, edible flowers are not affordable to buy easily because of the cost. Sainsbury's which is the shop located in the United Kingdom and it was built in 1869, owns foods, magazines, and other daily kinds of stuff and also edible flowers that cost three pounds per 100g. On the other hand, I calculated the average of broccoli, cauliflower and cabbage sector's 30 of products though, the average was about one pound and 17 pence. And from this measuring, the gap of cost between edible flowers and vegetable would be that how the products are made at once. For example, broccoli that is included in the sector can harvest a lot at once and the vegetable has a lot of farmers and areas to make, but edible flowers are not in the same situation. Therefore, to solve this case, edible flowers need farmers to plant and grow.

Another one of the causes would be most of the people who are living in the world especially developed countries don't have the custom to eat as usual food. The reason why focused on developed countries is that they have the power to expand things what they like by using media industries over a wide area. For example, Americanisation that means out spreading American cultures like fast food to all over the world has started and influenced to almost of countries from a few decades ago hence people are living with American culture remarkably in the current occasion. Presenter Susie Dent talked about American English to think about Americanisation in the BBC Radio 4 programs called "Americanize!: Why the Americanisation of English Is a Good Thing." The typical differences between American English and British English are some words like "color" and "colour", also some pronunciation. Sometimes I have a difficulty with British English accent because I've learnt English in American one until 16 years old. Originally, English is said that the West Germanic language and it was used by Anglo-Frisian at the first time. Afterwards, the language was imported to Britain and then other countries. Thus British people had a proud of their language and sometimes they who are American and British argued about the language. However, American English is spoken even in the United Kingdom recently. From this analysis, one fact is able to see that how the power of

Americanisation is big. They moved even original country. So I thought that we should focus on the developed country. Melissa Breyer said in the website called Treehugger though, flowers were used into traditional cooking in Chinese, Greek, and Romans for a long time ago. In that website, she negotiated how edible flowers are good to eat every day and how to eat each of the different flowers safely. If it's allium, all of its parts are edible, but if it's chrysanthemum, it needs to care a little bit when eating because the edible part is only its petals. It might be assumed that if people continued and expanded that culture to the world little by little, people who are living now could have them usually and had well known for safety nowadays. Hence the difference of culture is a really important cause for edible flowers and they need to expand like Americanisation.

Overall, there are a few problems about why edible flowers are not famous currently, which are the lack of people to advertise, the proportion of edible flower farmers, and the difference of culture throughout the world. Similarly, by researching about those of causes, I could find some of the new problems like the less of teenager TV viewers and improvement of agriculture sector better for farmers to plant more edible flowers in a lot of places. I think that the difference in culture is also a big cause for edible flowers. Although I have a lot of barriers to make edible flowers be famous around the world, probably I could get that what to do for betterment in this essay by defining a few of causes.

III

I would like to summarise about the book named 'The New Textbook of Global Business (新しいグローバルビジネスの教科書),' written by Eiji Yamada (山田 英二) to get the information about how to success global business. I will bold the sentences that I cited from the book so that you can see where they are easily.

The author talks about global business by using various examples and diagrams to get easily and think about distribution of globalisation, focusing on Japan in his book. Basically, the definition of globalisation is to get closer between country and country internationally caused by increase of transport and exchange of culture according to British Broadcasting Corporation. Immigration will also be one of the examples to explain what the globalisation means. The quantity of immigrant emigrant in 2015 was said around 244 million which is 3.3 percent of the worldwide population by United Nations Population Division estimates. Each of them would have different reason about why they immigrated or emigrated to other country. Despite I am staying in the United Kingdom for 10 months, but I have seen a lot of international people who are living and working in there around me like a teacher who immigrated from Japan with her family because she just preferred the UK. For example, 'Stone ax is local production and both of consumer and maker is same. On the other hand, no one who is working at PC mouse factory knows about every section of how to make it.' Therefore, business also could tend to global. 'Doing global business equals to division of labour.' Otherwise, surviving in this global world will be difficult. 'Humans can't live without dividing labours. It's sure that we are existing as relying on each other.' The division of labour means to separate each job which must be specialised to create one product. As a result, a company will be able to mass workers and people will also get some jobs. It might occur from the increase of population, too. Because people need jobs to get money and live surely. 'By the division of labours, each specialised works will affect to get more wealth because worker's technique will be higher. Moreover, collaboration of those who have accumulated skills will develop a new product, technique, and service like what is impossible to do alone. This work's geographically completed style is the globalisation.' However, does globalisation really give a good effect to the world although I was talking about globalisation so far. There're some countries which didn't like globalisation in ages ago. Especially, Japan has done the national isolation except some countries actually. 'What does isolating from the expanded division of labours? How effect does to stop transport give to the development of culture and agriculture?' The answer is getting worse of course. The first reason of why did Japan isolated from the world was that the government was afraid of expanding Christianity to citizens. Similarly, they also worried about citizens' loyalty to the government, they thought loyalty will be moved to the God of Christianity probably because of Christian who came into Japan like Francis Xavier. But the time continued even around the industrial revolution so that we might have to prefer the global way.

He also mentions about how important banking facilities are for business generally. 'Firstly, a supplier has to create a product what a demander really wants. In this process, the supplier will have a risk of stock. Furthermore, there will be a gap while handing the product in and receiving money. What will support this bridge between them? It is the confidence. The role of saving confidence is the banking facilities. If there's no role of it, every deal going to be done will be in the people who know each other very well.' 'Until develop those facilities, business was limited for only people who are in the rich class. It's a very surprising system to be able to have a deal with people who don't know about each other, this system was made by the bank. If there weren't any banking industries, the economy would be small worldwide. We also have to remember about that if there are no those facilities, we weren't able to divide each labour in vast area.' Thus, banking facilities are also very important when I am going to plan my global business

for edible flowers. 'As a result of Ltd. or corporation, it became available to save money from outside and use exactly gathered one. So the achievement of East India company is very big because by making risk money, business globalisation has been promoted.' I expected this company style will be nice. What's more, business planners need to keep check the world politics, economy, or even something very small event out because these factors also will affect the business. 'Banking industries are not independent; people must know about developed countries' bank business won't stand without social infrastructure.' To business with different countries, people need to make a promise. 'It's necessary to make coworkers promise to make a rule. There's private property rights, police, and administration of justice in society, the accumulate divided labours won't be constructed. On foundation of globalisation, people need to follow in the order, and there's only sovereign state to guarantee in current situation.'

'It won't be succeeded if you ignored things around you or just continuing what you want to do from ages ago without no change. You must imagine about that you'll be into the intense competition when the time when a lot of people are doing same thing as well has come out.' It suggests to have worth to my own edible flowers to survive from such race.

'Reverse innovation, this is the new instruction of how to create a business model related to globalisation. By going to different social environment situation when there's no new product idea particularly in the developing countries, bias of the environment surrounded around you will be taken off probably.' It provides me an idea of using experiences that I have got in UK studying abroad. Those are all that I thought useful for my own business plan.

Next, I would like to review the past result of edible flowers' business plan that my group has done to know and find points which I can use for my new one. In this paragraph, bolded sentences are the script I used in the group. In the second year KOA global studies which is a curriculum about international business plan for Asia and Africa, using 'food' as theme principally to grow eight skills which is critical thinking, collaboration & leadership, adaptability, entrepreneurship, communication, accessing & analysing the information, curiosity & imagination, and English. Our target customer was set in the rich class to sell edible flowers at a high price because as a result of our research about current occasion of edible flowers was expensive for people who are in the middle class. However, in my hypothesis, rich products are only for less 50 percent of people and edible flowers might be produced quite a huge number once. Hence the cost ought to keep in the affordable price for most of people. As you can see the figure 1 below, each y and x axis shows the product's price and quantity throughout low to high respectively. Two curved lines, red and blue are demand and supply; what kind of products customers need and how many amounts of products company can sell to them. The centre, both lines are crossed is the equilibrium; the level of customers' demand and how many of merchandise suppliers are able to provide have been even. Hence, I need to find this point from statistics I have got and current situation of people's interests.

Furthermore, my group was thinking to open an edible flower restaurant in our country, Japan internationally by using Social Network Service like Facebook, Instagram, YouTube and so on. 'Particularly, we focused on using YouTube, twitter and Instagram. We think the upload movies about edible flowers, we aren't famous you tuber so the number of total views would be low, so we thought the solution about it is by asking the help from many famous you tubers of interest celebrity for spreading our plan to everyone. If the degree of recognition increases, we think that information of edible flowers will spread out to everyone by most people that using the SNS information of edible flowers because it looks so cute and fashionable. As a result, we think that the edible flower will increase.' I thought this plot which is to tie up with famous YouTubers was good although it needs money. 'If we've got enough money, we would like to build our own restaurant for getting enough profit. The menu is like this one. We made all dishes with edible flowers that you can see now. Our considering restaurant's size would be about 66.12 meter square to 99.17 meter square. Menu would be a la carte, set, drink, and dessert. The price of menu and customer transaction would be like that. Also, the time would be from eight a.m. to nine p.m. Of course, we want to get funding for this business plan from the Crowdfunding. The content of it is, most people that they want to start their own business, demand and introduce their content about it and other companies or people help them with money. In addition, if the people that are helped by other companies succeeded, have to pay return of about 10 to 20%. Moreover, there is a rule that they have to give some commodity that they made with the funding. Then as a return gift, we would like to give some our shop's discount tickets.' The plan is on figure 2 below. As you can see, we've made this plan in detail but it wasn't possible because employees won't get income. 'In this moment, we need money to build our company so we will rent the fund from the Japan Finance Corporation. This mechanism is completely made of the fund from the government financial organ, and when we could though the examination about it then we can get money. Also, we can make the edible flower without using the pesticide-fee for promoting the artificial pollination. We think that growing the edible flowers within plastic greenhouse so we can get them in every season and month.' I might use artificial pollination and remind about banking.

Finally, I would like to construct my edible flower business plan. The first step is creating the main part of the organization, or company in Japan. The reason why I chose is simply that I'm living in now. However, planting

place is set in a foreign country which is located on the opposite side from Japan and the best place for flower planting. Then I will also make a company as my sub-organization thus it's able to contact with each other anytime and report whether flowers are well growing or not. After planting edible flowers, I would like to import or export them to other countries. To create this cycle, we need consciousness, build a good relationship. Mainly, I am considering to sell them online so that customers are available to buy them whenever they want and suppliers are always able to send fresh flowers. But perhaps some people want to see and try to eat them hence I would like to construct a restaurant of planted edible flowers for those of them. If the restaurant became famous, I will consider about chain restaurants in other countries though, but the first one would be held in Japan. Similarly, a website about my edible flower organization and restaurant will be created to inform about new edible flowers, how the restaurant is going. Moreover, I'm thinking to use YouTube to advertise edible flowers like my past plan. Commercial, vlog of restaurant and planting, for instance. Also, tie up with famous YouTuber will lead more people who are interested in edible flowers. About money for my business plan, I would make cost below by not have own building of organization so necessity is for planting at the first time. I will get those of money from bank and crowdfunding. The process of crowdfunding is told in the second paragraph. From those of plots, I think I will be able to get benefit costs.

IV

To sum up, there are some advantages and disadvantages of edible flowers. Although they have enough nutrition as vegetables, the taste has a problem to eat. I think that such positive and negative points are having enough possibility to make edible flowers be famous and achieve business. Despite I should think about the good way to improve three cons, taste, danger, and place, I think they will be solved. I think that edible flowers advantages and disadvantages can improve into better and benefits to be more popular than now, respectively. By using edible flowers as decoration or addition of dish, the problem of taste should be solved. Furthermore, I believe that we, especially parents need to have well knowledge of them before eaten by children because some of those flowers have poison. Similarly, the limitation won't matter by thinking that it's the benefit of edible flowers; as one of the pros, season, we are able to sell them as limited series and I believe that people like such things rather than normal products.

My edible flower business plan has been done, start from making an organization and website to inform about edible flowers to selling them to foreign countries. But at the first time, I have learnt about how globalisation is important in this current world. The target customer is who in the middle class, affordable price, the equilibrium between supply and demand. To keep low cost, I would not have own building and sell them on the internet mainly. However, for those of who want to try them, I also build a restaurant then advertise about it by YouTube basically. I would get money from crowdfunding and bank so that I will be able to make cost below. I have found a lot of good points and things to remind from the book. I believe that I could add some of those benefits to my plan. Also, I reviewed my past research about a business plan and found a lot of useful pieces of information. I was helped by them very much. I assure that I should research and plan quite in detail, analyse how benefit costs will be after owning the company though, but I think this plan has promoted better than the previous result and reached to realise this plan for the possibility of edible flowers.

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3 Things Threatening Food Safety Rina Shibauji

Food safety is a really important thing for human to live safely with peace of mind. It should be kept secured and any problem which threaten the food safety should not be occurred. However, there are some matters which are going against the food safety. It is true that more than 200 diseases are spread through food around the world and many people die every year as a result of eating unsafe food, according to the WHO. It also says that some incidents making the food safety under threat have been happened in the world. In fact, it is said that 1 in 10 fall illness and about 420,000 people are dead every year because of having contaminated foods, according to the WHO. Food contamination is one of the things which threaten the food safety. It is mainly caused by food additive, pesticide residue, mixing of harmful substances at the process of production, and so on. And then, food poisoning is one of the bad effects by food contamination. Moreover, it actually causes a serious effect to the people, for example diarrhoeal disease. This is the most common illness among the people which is caused by the consumption of contaminated food. Diarrhoeal disease causes 530 million people to fall ill and 230,000 people to be dead every year, according to the WHO. It is clear that the food safety issues are having bad effects both on the people and society in the world. In this essay, I am going to write about what seriously threaten the food safety, using the 3 types of food safety issues which are food additive, pesticide residue, and food poisoning, all caused by the food contamination. I will also describe the main incidents relating to the food safety issues which were truly occurred in Asian countries such as China and Philippines. Through this essay, I would like to reveal how bad the food safety issues' impacts both on the people and society in the world are, and determine whether we could have avoided the three incidents and whether these issues are possible to be solved or not.

I

First of all, there is food additive as one of the serious food safety issues relating to food contamination. Food additive is substance that is not consumed as a food and food ingredient, however it is added to food to assist the improvement and preserving its characteristics such as smell, color, taste and so on. Even if it has value of nutritive, it does not have nutrition. According to Fooducate, it can be divided approximately into 11 types, which are acids, anticaking agents, bulking agents, food coloring, emulsifiers, stabilizers, thickeners, flavors, humectants, preservatives, sweeteners. Some additives include more than 1 additive type. In China, food additive problem includes both misuse of allowed food additives and the use of illegal or non-sanctioned chemicals in food production. In fact, there was an incident which is called 2008 Chinese milk scandal in China according to The Guardian. Melamine which has serious bad influence for human body was found in milk products. Furthermore, other products were also having a lot of melamines, and those were found by the government on closer examination of products. As a result, the children who had the milk got kidney stones, and 6 children were died because of that. It is said that there are about 300,000 victims of this incident in total. In addition to this incident, recent food additive incidents tend to involve the use of illegal additives in China.

Pesticide residue is also mentioned as one of the food safety issues relating to food contamination. Pesticide residue means remain of agricultural chemicals in crop, food, and soil. Agricultural chemical is a medicine which is used at farming. They adjust the growth of plants, and include the major operations such as sterilization, killing insects or pests, and weeding. Pesticides potentially have toxins and bad effects to human body depend on the quantity. Actually, there are more than 1,000 pesticides which are used by the people in the world according to WHO. Each pesticide has different properties and toxicological effects. For example, in China, there were some incidents relating to pesticide residue, through the state limits the amount of pesticide correctly. According to Forum on Health, Environment and Development, the usage of pesticides increased more than 2.4 times from 1990 to 2010, and the number reached over 17 million tons. In fact, there was a serious incident which is called pesticide poisoning of sweet potato crops in China in 1994. The local farmers used the high-toxic pesticide which is called parathion and should not be used for agriculture. The results of the incident were over 300 cases of poisoning and 3 deaths in total. Also, there was a case that a lot of students were poisoned and 23 of them went to hospital due to eating vegetables that have excessive pesticide residues.

In addition to food additive and pesticide residue, food poisoning can be given as one of the food safety issues relating to food contamination and the effects of food contamination. The definition of food poisoning is the illness which the causes are many bacterial and viral or parasitic agents. Typical symptoms are nausea, vomiting, watery or bloody diarrhea, abdominal pain and cramps, and fever. The signs and symptoms usually start within hours or days or weeks later after eating bad food of those causes. According to the data in 2010 by Foodborne Disease Burden Epidemiology Reference Group(FERG), the annual damage of food poisoning in South Asia includes more than 150 million illnesses, 175,000 deaths, and 12 million DALYs. It also says that 3 in 10 children under five years old suffer

from diarrhoea in South Asia. In fact, there was an incident in 2015, which was called Caraga candy poisoning in Philippines. The number of victim of this incident was almost 2,000 people, which mostly account for school children. They had food poisoning because of eating candies which were past the best-before date and repacked illegally by the store. Their symptoms were diarrhea, dizziness, and stomachache.

II

First of all, food additives are used for many food products though they are not good for health because they have a lot of useful functions for making processed foods or keeping the food condition good. Food additives have many functions used for improvement of food quality. There are 11 types of food additives and each food additives have specific jobs. Acids has 2 roles which are making flavors sharper and acting as preservatives and antioxidants. Anticaking agents prevent powders such as milk powder from caking and sticking. Bulking agents increase the bulk of a food. Food coloring is used to food to replace colors lost and make colors more beautiful. Emulsifiers make water and oils mixed easier. Stabilizers allow foods to be a firmer texture. Thickeners increase viscosity without any change of its other properties. Flavors enhance their aroma. Humectants prevent from dry. Preservatives has a role to prevent from bacteria's invasions, growths, increases. Lastly, sweeteners make food more sweet. Because of those useful functions of food additives, food companies would like to use them for their profit. Regarding the 2008 Chinese milk scandal, the company told that they added melamine to boost the tested protein level of watered-down milk. In order to pass the examination by the government easily, the company used the melamine without consideration for human body.

Secondly, concerning pesticide residues, these are the remains of agricultural chemicals in crop, food, and soil. Their purposes are adjusting the growth of plants, sterilization, killing insects or pests, and weeding. First of all, there are 5 specific advantages of using agricultural chemicals and those can be considered as the causes of being used of agricultural chemicals. First, they support the growth of plant. Second, they provides a predictable and efficient source of nutrients. Third, they make crop big and fast on the manufacturing process. The crop can be big and have fast growth, because chemicals have primary nutrients. So, farmers do not have to feed a lot thanks to the chemicals. Fourth, they can increase harvest yields. Because the production is quick and efficient, they can increase harvest yields. Fifth, they are not expensive and not difficult to transport. The agricultural chemical which is used illegally when the pesticide poisoning of sweet potato crops in China in 1994 is very harmful for the human bodies. That chemical is called Parathion, and it is used because they have jobs as an insecticide vermicide pesticides and an acaricide.

Thirdly, food poisoning is happened by eating unsafe foods such as contaminated food. It can be considered that there are a lot of causes of food poisoning. First, bacteria and virus are the main causes of food poisoning. In addition, contaminated foods do not always taste bad, and most of the time those smells and tastes look like normal. So, people cannot notice and avoid the contaminated foods. This is one of the reason why people get food poisoning. On the food poisoning in South Asia, there are many causes of food poisoning illness and death. The top 5 causes of food poisoning illness are *Campylobacter* species, *Shigella* species, Enterotoxigenic *E. coli*, Non-typhoidal *S. enterica*, Norovirus. The top 5 causes of food poisoning death are *Salmonella typhi*, Norovirus, Hepatitis A virus, Non-typhoidal *S. enterica*, Enteropathogenic *E. coli*. There are many opportunities for food contamination to take place. It means the long range of food supply including on-farm production, harvesting, processing, storage, transport and distribution makes the opportunities to happen the food poisoning issues. There was an incident in 2015 which was called Caraga candy poisoning in Philippines. They had food poisoning because of eating candies which were past the best-before date and repacked illegally by the store.

III

First of all, contaminated food causes diseases and carries so many kinds of diseases to the people in the world. According to WHO, there are some facts resulting from the consumption of contaminated food. More than 200 diseases are spread through unsafe food containing harmful bacteria, viruses, parasites or chemical substances. These diseases range from diarrhoea to cancers. Then, about 600 million people which means almost 1 in 10 people in the world fall ill due to eating contaminated food and that causes of 420,000 deaths every year. That results in the loss of 33 million healthy life years (DALYs). Regarding Diarrhoeal diseases which are the most common illnesses and the result from the consumption of contaminated food, those cause 550 million people to fall ill and 230,000 deaths every year. Besides, children who are under 5 years old carry 40% of the foodborne disease burden, with 125,000 deaths every year.

Secondly, contaminated foods allow the human body to be unhealthy. Contaminated food can cause of long-term health problems. Heavy metals which are included in contaminated food cause those health problems according to WHO. For example, of some serious effects associated with several common types of food poisoning, there are kidney failure, chronic arthritis, brain and nerve damage, and death according to [Foodsafety.gov](http://www.foodsafety.gov). And, it says that

hemolytic-uremic syndrome is a serious disease which usually occurs when an infection in the digestive system produces toxic substances that destroy red blood cells which are from kidney injury. This illness is caused by infection of bacteria. Then, some people who are in shigella or salmonella infection from contaminated foods in their bodies get pain in their joints, irritation of the eyes, and painful urination. This is called reactive arthritis and can last for months or years, also can lead to chronic arthritis which is difficult to treat. People who are in Campylobacter infections may also develop chronic arthritis. About brain and nerve damage, a listeria infection can lead to meningitis which is an inflammation of the membranes surrounding the brain. If the infant has that, long-term consequences may include mental retardation, seizures, paralysis, blindness, or deafness. Also, Guillain-Barré syndrome is a disorder that affects the nerves of the body.

Thirdly, foodborne diseases affect vulnerable people harder than another group to live. Especially, it is hard for vulnerable people such as infant, patient, pregnant women and old people to live with disease caused by contaminated food. That is because their bodies are not as strong as that can overcome those diseases and more difficult to overcome them than other people. Also, those people are easy to infect those illness and get higher impacts of those illness. According to Foodsafety.gov, infants are at an increased risk for foodborne illness and related health complications due to their immune systems are still developing. Those children are unable to fight off infections as well as adults can. In addition, they produce less stomach acid that kills harmful bacteria and makes it easier for them to get sick. Besides, it says that cancer patients are at a greater risk of suffering from a foodborne illness due to their weakened immune systems that are because of cancer treatments, such as radiation and chemotherapy. Those affect the blood cells that protect against disease and germs, and are known as neutropenia. As a result, their body cannot fight infection, foreign substances, and disease, as well as a healthy person's body can. In fact, whereas people with healthy immune systems rarely succumb to the virus, cancer patients are 53% more likely to die from an adenovirus infection.

IV

In conclusion, it is clear that the food safety issues relating to food contamination including food additive, pesticide residue, and food poisoning which is also one of the effects of food contamination are really serious. Also, the 3 incidents gave the bad influences to the people and society. I think that those bad influences of the incidents would not have been impossible to avoid if some people had taken care of the food safety more. I believe that there were some ways to avoid those incidents. First of all, on 2008 Chinese milk scandal, it can be absolutely said that the investigation of food safety in China was inadequate, and the government should have examined more strictly about that. Secondly, about the incident of sweet potato crops in China, it can be also said that the education about how to use pesticide correctly for farmer was not enough, and they ought to have educated more to make crops safely. I feel that more strict examination or permission for starting farming by the government was necessary. Lastly, on the incident of Caraga candy poisoning, I think that the food company should have made stronger package which cannot be opened easily by someone. Also, I think that there was a lack of attention by consumers, which ascertain whether the foods are safety or not from the color or smell. I guess that the food of past the best-before had some different properties compared to the usual one, and if they might have taken care of that more, they could save from the suffering of the damage by themselves. I mean that it was also lack of the education of accurate knowledge for food choice to prevent the health from suffering. Therefore, it can be said that proper food preparation is necessary for the people to live safely, and it should be given. The government is the most important institution which provides it, and the government always should be perfect to prevent the food safety of the citizen. And then, each food safety issues have causes of using of food additive and agricultural chemical and happening of food poisoning. Regarding the milk scandal in 2008 in China and sweet potato crops scandal, I think it was difficult to avoid the scandal but the government should have researched it more. Concerning the scandal of Caraga candy poisoning, I think it was really difficult to find out that the candy was unsafe and repacked, so it could not be avoided. Also, the food safety issues have great affects which are bad for the people. People suffer from diseases carried by contaminated food. The amount of patient caused by the disease are huge and those patients include not only adults but also young children. Contaminated foods let the people get long-term health problems and the heavy metals included in those food are the cause of that. In the people who fall in disease caused by contaminated food, especially, the vulnerable people are hard to be alive and overcome the disease. Basically, those issues can be solved by exterminating of contaminated foods. The important thing to exterminate them is that what we should know are that to keep food surfaces clean and wash all utensils, plates, platters, and cutlery as soon as used. Also, to separate raw food from cooked food is one of the way to prevent the consumption of contaminated foods. Then, to cook food thoroughly, to the appropriate temperature, to keep food at safe temperatures, both for serving and storage, to use safe water and raw materials are also mentioned as the way not to consume contaminated foods.

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Poverty in the Philippines

Rine Makino

In the summer when I was a 2nd year high school student, I went to the Philippines as school field trip and I visited girl's home that is orphanage, elderly people's house and Smokey Mountain. In the Philippines where is developing country, there are many people who are living in with poverty situations where are not enough foods, dangerous and dirty. The population of the Philippines is about 103 million. According to the "Inquirer.net in 2015", more than 12 million people are living in extreme poverty and more than 26 million people remain with poor in the Philippines. In this essay, I will explain three types of poverty, causes and effects in the Philippines that is included the situation that I went to the Philippines such as girl's home, elderly people's house and Smokey Mountain. Also in the conclusion, I will determine what types of poverty is the biggest problem in the Philippines and I am going to suggest the solution to solve and make these situations better.

I

Firstly, I will evaluate the situations of the girl's home in the Philippines. In the girl's home, there was many children who don't have their family and can't live with their family. In their house, there is no privacy, small, and not good situation for their house. In their room where they sleep, there is some children in the same room, so it will be stressful for their children. The perspective of food, the children are provided food but it is not enough. When I visited the girl's home and in the lunch time, some children kept food to eat later. It means that there is not enough. Also, education, children can take education in the girl's home. It is big difference from the children who live in the Smokey Mountain which are homeless. The reason why the children live in the girl's home is their parents don't have money to take care their children, their parents work in faraway to earn money. There are many various age children from baby to about 18 years old.

Next, I will show the situation of the elderly people's house in the Philippines. In the elderly people's house, there are many elderly people in the place which is small and not good situation for their health. There are a lot of people in the same place that they gather, there are only almost chairs and a little table. They don't have family and can't live with family. Almost elderly people looked fine but some of elderly people got hurt because of accident. On of the reason why many elderly people can't live with their family is their family gave up to look after them. Some people have hurting by accidents so it is difficult to look after them for their family. When I visited to the elderly people's house, I could meet, talk and communicate with many elderly people, but some of them were a little dangerous to communicate with people so they were entered in other place that they cannot communicate.

Finally, I will tell the situation of the Smokey Mountain in the Philippines. In the Smokey Mountain, the environment is bad for their health. For example, the smell is not good, there was a river that the rubbishes were flowing near their place where they live. The people in the Smokey Mountain don't have place to live with comfortable. It means that if they have house, it is difficult situation to say "house" because their house is almost broken and dangerous. Also, people in the Smokey Mountain don't have food to eat to live so they look for something to eat in the river with riding on the float. There are not only people who are living at place like house that is almost broken and near to river which is dirty but also there are people who are living under the bridge or at the corner on the road.

II

Firstly, I am going to talk about the cause of the girl's home. The cause in the girl's home was that children need to live in or go to the orphanage because their parents don't have money to take care of them. The reasons why their parents don't have money is that their parents are working far away to earn and get money, thaei parents were violent people or the children were abandoned and neglected. Also, the reason why there are not enough food to eat for children in girl's home is that there are too many people so that it is difficult to give them enough food.

Then, I am going to explain about the cause in the elderly people's house. The reason why many elderly people live in elderly people's house is that they were abandoned by their child or their grandchild because it is hard to take care of them. Also, their child or grandchild needs money themselves to live. In my case, I talked with a woman whose right leg is paralyzed because of accident and she was entered to the elderly people's house by her family because her family decided not to take care and support her. She looked so sad and she missed her family. Also, I met other people who were abandoned and were entered by their family because it is going to be difficult to stay with elderly people, it needs to support and take care of them carefully.

Finally, I will evaluate about the cause of the Smokey Mountain. People who live in the Smokey Mountain don't have money, they don't have job and they don't have place to live because they didn't take education. It means that many people who are in the Smokey Mountain don't have knowledge to get jobs. As a result, there are no choice and way to live without being homeless people. When I visited there, I saw many people who were getting something

to eat or use for live by swimming in the dirty river or walking on the road which was very bumpy and dangerous to walk.

III

Firstly, I will talk about the effects of girl's home. The Philippines has 1.8 million abandoned children, so in orphanage, there are many children who don't have family or can't live with family. However, in the orphanage, there are not enough space, room and food. It will be related to there is no privacy because children have to share room with other children. It might be stressful. Because of there things especially not enough food, many children are small compared with average children with by each age.

Next, I will show the effects of elderly people's house. According to "global network", in the Philippines, the number of older people is increasing rapidly, faster than growth in the total population, so there are many elderly people same as girl's home. In 2000, there were 4.6 million senior citizens, representing about 6% of the total population. In one decade, this grew to 6.5 million older people or about 6.9% of the total population. The National Statistics Office projects that by 2030, older people will make up around 11.5% of the total population. Also, there is not enough space, and some elderly people are dangerous to communicate with people so they can't be same room with other elderly people.

Finally, I will explain the effects of the Smokey mountain. According to "Homeless World Cup Foundation", a quarter of the population lives below the national poverty line. The capital, Manila, has the largest homeless population of any city in the world which is 3.1 million. An estimated 1.2 million children in the Philippines sleep rough, with 7000 in Manila. The sleep on the road, floor or under the bridge because they don't have house to live with comfortable. For homeless people, they aren't sure that they can live everyday. The people who live in the Smokey Mountain will remain because they give birth child and it will succeed for next generation.

IV

My experience in the Philippines taught me a lot about poverty. The biggest problem is the Smokey Mountain that means homeless people. The poverty for me is that I don't have money to live and eat, cannot live with my family, cannot take an education. Of course, the girl's home and the elderly people's house are also poverty and big problem I think. But it is very difficult for people who are in the Smokey Mountain that means homeless to live. Almost people in such as situation don't have even house. It means that they are not sure that they can live every day. I think that the situation of the Smokey Mountain is the biggest problem of poverty in the Philippines. Many people simply do have not enough money, food, cannot live without supporting their family, and cannot receive proper education. The people who live in the Smokey Mountain area is not sure that they can live every day because their situation is very dangerous. Then in order to solve these problems, people who are in the developed countries and governments need to support and try to make these situations better. For example, they need to collect money to help people who are in the poverty, also they might need to think about giving food for children in the Philippines like by using Onigiri action which people take photos and posts which are included onigiri and then 5 school meals will be given to schools where are poverty in the world. Moreover, people who know the knowledges for making foods, or how to live, they might be able to teach them. It shows that people who are live in poverty can live sustainable. Like these, people might be able to help people who are in the Philippines and I think that these situations might decrease.

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Serious Problems of Japanese Agriculture

Rio Koshida

Japanese agriculture problem is serious, it affects throughout Japan. Now, Japanese agriculture is known as high level agriculture around the world. Surely, Japanese food is relied upon a lot. However, the number of workers who work in agriculture is decreasing. The reason why is partly due to a decreasing Japanese population, but also due to urban drift, where people move to cities for a better life or more economic opportunities. As a circumstance, according to the Tofugu, Japanese population will decrease from 127 million to 88 million. It will be the biggest issue of Japanese agriculture. In this essay, I'm going to explain about Japanese agriculture's benefit and disadvantage including like circumstances, population. Also, it will be negative effects.

I

Japanese agriculture is sustainable for Japanese people and it's relied from them. According to Facts and details, Japanese agriculture has 2 main type of agricultural fields. Those are irrigated rice fields called "tambo" or "suiden", and non-irrigated fields called "hatake". In addition, Japanese rice is known as high-quality stuff. Another good point is this job has no limit of retire. According to Facts and details, one old man who works in agriculture is 70 years old. Normary, it has to retire at 60 years old. This is good for them because they can teach to their child, grandchild. Also, according to the Tokyo Foundation, the average age of farmers was 65.8 years old in 2013. According to Trading Economics, the amount of people who work at agriculture was about 3.5 % in 2016. This number is low, but these number' people are working in agriculture. Therefore, their job is going to be valuable for us.

The biggest issue of Japanese agriculture relates to population decline. According to the Yomiuri Shimbun, farmers feel the effects of Japan's eventual population decline first. Actually, according to Japan Times, Japanese population is expected to plunge to 88 million in 2065. Now is about 127 million. Also, it relates to Japanese agriculture. Its amount is declining from 4.5 % to 3.5%. In addition, climate change affects the Japanese agriculture problem. Actually, regional temperature increases have already affected in Hokkaido. According to the Japan Times, climate change induced increases in water temperatures will affect an agriculture. In addition, according to The Tokyo Foundation, the number of area of cultivated land is decreasing from 6.00 to 4.69 while 1965 to 2005. So it means the amount of food will decrease.

II

Japanese agriculture is known as bad. It's because the number of worker is decreasing and it has some problem. Also, it relates to Japanese population decline. Now, as a circumstance, elderly people's amount is bigger than young people. Japanese agriculture is known as the amount of people who work on agriculture is almost elderly people. But its population is declining. This is bad for them because we need more worker who work at agriculture. Therefore, I'll explain about Japanese agriculture's circumstances. The purpose of this essay is to know the circumstance of Japanese agriculture. This is known as it's going to be bad despite a proud of Japan. I'll write about Japanese agriculture's cause and effect. It has some problem and causes.

First of all, in Japan, the number of people is declining now. It affects to agriculture. Japanese population is declining. Now, it's about 127 million. However, it's said it is going to decrease. According to Tofugu site, it'll decrease from 127 to 107 million in 2050. Also, the number of people who work at agriculture will decrease. This is a serious problem for Japanese people. It's because if population decreased, they can't approach about Japan. We're proud of Japanese products. For example, rice, fruits, vegetable. Japanese stuffs are known as expensive. But it's also known as these are high quality. Actually, according to the Tokyo Foundation, the number of people who work at agriculture is decreasing from 11.51% to 3.35%.

In addition, the number of Japanese cultivate land is decreasing. This is a big problem to agriculture. It's not just a problem. According to the Tokyo Foundation, it's decreasing from 6.00% to 4.69%. Also, Japanese cultivate land is too small. In addition, the total number of farming households are decreasing too. According to the Tokyo Foundation, it's decreasing from 5.66% to 2.85%. As you can see, it's all decreasing about Japanese agriculture. It also will relate to the amount of rice product. According to the Tokyo Foundation, it's decreasing from 3.9 trillion to 1.9 trillion. If the land decrease, the amount of some products will be decrease too.

It has another cause. It's declining birthrate and aging. The number of young people is bigger than elderly people's number however, it'll be changed. According to the Japan times, the number of them is decreasing from 2.696 million to 13.66 million. However, in Japan, the number of elderly people are increasing. According to the Tokyo Foundation, the number of them is increasing from 5.621 to 26.565. It means nobody do an agriculture in Japan. It's because of in Japan, most of worker is elderly people. Some young people work at agriculture but most of them don't

do that. Also, the age who works at agriculture is about 65~70 years old. To increase elderly people is good for agriculture, but it can be said the number of people who die by disease will increase.

III

Japanese agriculture has some good points and bad points. However, it's almost bad. Also, as you know Japanese agriculture is important for our life to live. It's because they love rice. Rice is the most important stuff for Japanese. For example, it's used to "Washoku". It's our traditional thing. But, if we cannot be able to eat it, how we can have proud of us? We have to figure out what is good and bad. and finally, I'll write about solution for it. In this essay, I'm going to write about solutions of Japanese agriculture.

How can we solve about Japanese agriculture? We have to save it for our future. Japanese agriculture has some problems related by Japanese population, working-age, and birth rate. But, we can't change this circumstance. It's because these are natural issue. For example, according to the Japan times, the number of Japanese people is decreasing from 2.696 million to 13.66 million. If all of them got married, and had a baby, we can change this problem. However, it's impossible. As other issue, the number of elderly people is increasing now. If elderly people are working with young people, that's good for Japanese agriculture. However, it seems that only elderly people are working. On Japanese agriculture, they can work until 70 years old. But we can't stop that decreasing population. Therefore, we can't do anything about population.

We should do something for saving Japanese agriculture, so what is the issue about it? We shouldn't lose our Japanese agriculture. It's because we always eat rice for every day. Also, it's used to "Washoku." Washoku is the most important thing for Japanese. Therefore, we have to save to appeal it. However, we don't have money a lot now. So, in my opinion, we can do volunteer to earn money for agriculture. If they have a lot of money to save it, they don't have to lose it. We need rice, vegetables for living. If they have a lot of money, they can have more cultivate land. and then, they can make a lot of stuff. I think all them need is money. and what we can do is to earn money for them and we can contribute for Japanese agriculture. According to the Nations Encyclopedia, Japan is the second largest agricultural product importer in the world. It's because Japanese product imports of \$34.6 billion in 2001. At \$32.1 billion, Japan had the largest agricultural trade deficit in the world that year. By this circumstance, Japanese agriculture is wasting of money and time because they had trade deficit by doing trade between some countries. Therefore, they should stop doing trade a lot to save money. I think that's the best way for Japanese agriculture.

IV

In conclusion, Japanese agriculture seemed good for people, but actually it has many negative issues. Also, it comes from Japanese population decline. So, it's difficult to be better than now. In addition, if we can't eat some Japanese vegetables and rice, we'll lost many traditional things. For example, in Kyoto, "Kyo-yasai" is very famous, and in Akita prefecture, their original rice is famous too. We can't tell many Japanese traditional things to the world. Japanese agriculture relates to declining and increasing for everything. In my opinion, Japanese population is declining now. If it is decreasing more, worker who work at agriculture will decrease either. So, we can't be able to eat Japanese traditional stuff. The number of Japanese cultivate land is decreasing. For worker, cultivate land is too important to make food. Without it, they can't make this stuff. Then, the number of elderly people is increasing now. It's good for Japanese agriculture. It's because they work at agriculture a lot than young people. However, It means the number of young people is decreasing. If they don't learn how to work at agriculture, they can't contribute for Japan. What we can do to save Japanese agriculture is earning money and stop doing trade a lot. We can't do anything about Japanese population, but we can do to have more cultivate land and make some stuff. Japanese agriculture has a lot of problems. That means good thing and bad thing. However, it's almost known as bad. I don't want to lose it. We have to tell about Japan to foreign country. It's because Japan is the best. I learned from this study abroad. Also, Japanese rice and vegetable are known as high-quality stuff. However, honestly Japanese agriculture is bad. It's because most people who work on agriculture is elderly people. This is the biggest problem. They have to teach to young people how to work on agriculture. If they did it, it doesn't have a lot of problem. Surely, they can work until 70 years old. That's good for them. However, if they died, who can continue working on it? Also Japanese population is decreasing. So, they have to work with young people from right now.

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Mangroves Are Essential Resources for Our Lives

Ririka Sasaki

Decreasing mangroves is an important issue in the world, especially in tropical areas. Mangrove forests only grow in tropical and subtropical latitudes near the equator because they cannot withstand cold temperatures. Because their natural area is limited. It is said that there are more than 100 species of mangroves that thrive along the equator. According to the FAO, the total mangrove area is around 150,000 km². However according to WWF global, more than 35% of the world's mangroves are already gone. Mangrove forests are the economic foundations of many tropical coastal regions providing at least \$1.6 billion per year in "ecosystem services" worldwide. It is estimated that almost 80% of global fish catches are directly or indirectly dependent on mangroves. Although the economic value of mangroves can be difficult to quantify, the relatively small number of mangrove species worldwide collectively provide a wealth of services and goods while occupying only 0.12% of the world's total land area. In summary, I will describe about the benefits, causes of habitat loss, and solutions to determine what is the issue of this problem and how people work for this problem.

I

First, I will talk about the benefits of preserving mangrove forests. Mangroves can preserve ecosystems. Mangrove forests are diverse ecosystems that include mammals, birds, reptiles, amphibians, insects, crustaceans, fish, and plants. They are abundant with life above and below the waterline and family known as a "cradle of life" Furthermore, shellfish, Ilima, and mackerel live on the trunks and pillars of mangrove plants, which are also used for aquaculture products for human consumption.

In addition, mangroves can sequester carbon inside their wood. It is said that carbon stock of mangrove is several times that of tropical forest. Mangroves sequester up to 25.5 million tonnes of carbon per year, and provide more than 10% of essential organic carbon to the global oceans. Therefore, it will act photosynthetically more than other plants. Mangroves can prevent global warming if they were only left alone.

Also, mangroves help improve water quality. Mangroves have a natural purification ability to clean air and water. They are used in aquariums that grow mangroves because it plays an important role in cleaning water. Also, mangroves can be raised in both soil and vases, it is easy to use. And absorption of freshwater is done by osmotic pressure of root hair cells at the tip of the root, but seawater with a different osmotic pressure. It is a strong life force.

Moreover, mangrove protects people from high waves. Mangrove forest help people's lives. In tropical area, there are no weirs. Here mangroves have spread, so it plays an important role to protect high waves. Looking at an example of mangroves, Vietnam spent 7.3 million dollars to maintain the levee, but choosing a method to preserve mangroves that can be expected to reduce the damage caused by tsunamis would lead to about 1.1 million hectares. Cost-effectiveness means that conservation of mangroves is better than creating levees. In other words, the ecosystem services that mangrove brings, in this case, adjustment services here, can be said to be great.

II

Having considered the importance of mangroves, they should be preserved and allowed to flourish for the environment of the earth. However, mangrove forests have been decreasing rapidly in the world. There are two major causes of the destruction of mangroves: shrimp farming and palm oil.

First, shrimp farming caused severe habitat destruction to mangroves. Many Mangrove forests have been changed to farm shrimp. And it is a good place for shrimp farming. Similarly, clearing of mangroves for shrimp culture contributes 38% of global mangrove loss, with another aquaculture accounting for another 14%. Shrimp farming impacts on decreasing mangroves greatly. The shrimp harvesting method takes two cultures, taking aquaculture and natural shrimp. The breakdown of shrimp yield is about 4.45 million tons for aquaculture and about 3.42 million tons for nature and more recently aquaculture is done more often. Many of them are produced in Southeast Asia region. Japan is a mass consumer of shrimp. Currently, production in Japan is very small compared to shrimp consumption, more than 90% of it is imported. And Japan imports from Southeast Asia region such as Vietnam, India, Indonesia etc. Also, Japan consumes about 1.3 kg of shrimp per household throughout the year.

The production of palm oil causes decreasing mangroves as well. Palm oil is the oil collected from the fruit of "oil palm". It is so useful, a versatile oil that can be used even if it is solidified or melted. It is used as chocolate, ice cream, chips, cup noodle and French fries and so on. People need palm oil and everyone eat a lot. And palm oil grows in tropical area. It's the same as mangroves. However, we need to cut forests, it is a big problem. In Indonesia and Malaysia, about 3.6 million hectares of forests were harvested to make room for oil palm plantation over twenty years. In forests opened up to make plantations, many people such as indigenous people live using forests. However, the incident that people are forced to live in order to expand the farming landscape will never fail. Mangrove is also

one of them. Expansion of aquaculture industry in this area has led to mangrove forest cutting. The disappearance of mangrove forests in the last few decades is mainly due to economic activities such as conversion to residential land, industrial land, aquaculture pond, farmland and oil palm (oil palm) plantation, partly imported from overseas Frozen shrimp, charcoal and palm oil (coconut oil) also contribute to the decrease in mangrove forest.

III

If people don't start solving this problem, mangroves will continue to rapidly decrease. Then there are a lot of countries and companies that they are helping for saving mangroves and many solutions were made by them. In this thesis, I will introduce about two solutions that I think are the most effective measures to reverse the decimation of mangroves.

First, some companies and administrative agencies are doing projects for saving mangroves. These days, more people know about the importance of mangroves in the environment. So some companies and administrative agencies are doing projects for saving mangrove. For example, in Japan, In 4 years since 1999, Tokio Marine & Nichido implemented 3,444 hectares of mangrove trees in 5 countries in Southeast Asia and in 2004 they started to engage in 2 national projects with 6 countries in Southeast Asia and Fiji in the South Pacific, 2000 hectares in 5 years planting of mangrove plantations was carried out. And since the year 2009, the third phase project has begun. In Thailand, it was implemented in Ranong and Chumphon provinces from 2000 and planted 900 hectares of trees together in the first and second stages. And mangrove forests planted in Ranong province were also used for commercials at Tokio Marine & Nichido and it became a tool to convey mangrove planting to the public. So a lot of companies are helping to save the mangroves. Next, from 2005 to 2007 ANA supported reforestation in northern Thailand, Phuket and Chai Nat prefecture. Planting trees were held in Phuket in 2005, in Chiang Mai in 2006 and in Chai Nat Province in Thailand in 2007. Furthermore, INA Design Consulting Systems is planning a wide variety of events and projects, and are planning to plant some of the admission fee of the event attendees planned for reforestation support from 2008. They have a unique plantation site and implemented a 5-hectare mangrove rehabilitation project. They are actively working on proposing new ideas as a way for young Japanese young people to focus on environmental activities from familiar places rather than recruiting participants. There are a lot of companies that help saving mangroves.

Regarding this issue there are a lot of solutions. First, I promote inland shrimp farming because shrimp farming is a big cause of decreasing mangroves. In the first place, mangroves have not been clearly owned, so there have been many conditions where mangroves have been decimated without permission. Because of the adverse effect in the environment by removing mangroves, mangrove forests need to be public property and protected by the government. If farmers could do shrimp farming inland, they would not need to cut any mangroves. The way to make it inland is by pumping water from the ocean and making fish ponds inland. Then, we will create a union among fish farmers, talk about the price of uniform shrimp, and create a mechanism that can sustain trading. The contracts for harvested shrimp need to have manageable sellers in urban areas and coastal regions for distribution so that a fair price for that shrimp can be enforced. The government must subsidize or loan the funds for the inland pond development and control a system that contracts with aquaculture managers and workers. However, if they do that they will need a substantial amount money. There should be a sticker that brands the environmentally friendly process of shrimp products that educates the current status of mangroves. It could be a sticker on shrimp products that shows a picture of a mangrove. That would allow public awareness and build consumer loyalty to buy premium shrimp products. I think awareness is the best way. Social media would be a very good platform for spreading awareness of the current state of mangroves with the government and local farmers protecting the environment.

IV

In summary, I wrote about the benefits, causes, and solutions of mangroves to determine the main issues of habitat loss for mangroves and how people can solve this problem. The advantages of mangroves as part of a greater ecosystem than shrimp farming or palm oil production have been understood by various governments and already has seen changes to help the environment. I think shrimp farming is the biggest cause of decreasing mangrove forests because countries, especially Japan, have huge markets for importing that led to vast amounts of destroyed mangrove lands to increase shrimp farming productivity. It is also difficult to avoid the spread of aquaculture and the benefits to humanity its food products bring to many consumers. However, with minimal effort people can save mangrove forests. As consumers, people can choose to buy aquaculture products labeled as not having any damage to mangroves. By promoting a brand that sells sustainable and environmentally friendly shrimp production, people can use purchasing power to force private businesses and governments to enforce better policies for mangroves. For example, if farmers were subsidized to do inland shrimp farming, they would need to cut down mangrove forests. There are currently a lot of volunteers whose focus is mangroves or the environment. Organizations such as UNP could find the means to

replant damaged mangrove areas and help governments properly regulate public lands safe from aquaculture or palm oil production. The future for mangroves can easily be safe from destruction. Humans are the direct threat and also the best protector of beneficial ecosystems for the environment. There must be a high priority to rebuild and maintain mangrove habitats around the world in order to protect tropical areas from natural disasters such as tsunamis and promote carbon sequestration in the tropics to avoid the exponential damage of CO₂ changing the world's climate.

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Smoking in Japan
Ryusei Takemoto

Everyone knows that cigarettes are harmful to their body. But Japan continues to sell the cigarettes which addictive and illness-causing. Most country and person think that even if you hurt your health, whether you smoke cigarettes is personal free. Marijuana was banned because the people agree that people should not smoke marijuana. However, cigarettes are not prohibited by law. In Japan, the consumption per capita in 2015 is 1618. In this essay, I will explain the physical effects of tobacco, pros and cons of sale of cigarettes to determine, country not make a cigarette sales cancellation and if it is a benefit or distraction.

I

First, I will talk about benefit of sale of cigarettes. The biggest advantage of sale of cigarettes is that consumption can increase because smuggled cigarettes can be purchased cheaply. One-third of annual global exports go to the poaching market, which has a tremendous impact on consumption and increases the burden of disease, especially in poor countries. If cigarettes increase the number of patients, the hospital will be able to make money through treatment. If you do that, you will get good results from economically because of the consumption and treatment costs of buying cigarettes. In addition, according to the Ministry of Finance's tobacco tax revenue budget of 2016, the tobacco tax is 923 billion yen, the tobacco special tax is 142.8 billion yen, and the national tax amount is 1,658 billion yen. The prefectural tobacco tax is 149.9 billion yen, the municipal tobacco tax is 9117.1 billion yen, the local taxes total 1.67 trillion yen. Total of the national tax and local tax together total 2,138.8 billion yen. The consumption tax will be added to this, it will be tax revenue of more than 16,000 yen per citizen. For that reason, we do not need to be increased tax.

Next, I will explain about drawbacks of sale of cigarettes. One of the biggest negative effects although it is the effect of nicotine, it is this nicotine to habit and depend on smoking. By including this nicotine, smokers become addicted to nicotine, depend on tobacco, and they cannot be stopped. In addition, negative effects of smoking on the human body is that it erodes the brain. A researcher at London's King's College London reported in November that smokers are more susceptible to brain damage than hypertension or obesity. This means that you can not get better with exercise. Other diseases can be treated with exercise or diet control, but the cigarette is continuing to gets worse our health. Furthermore, It is said that if you smoke twenty cigarettes a day, 28 days of life will be shortened in one year. This is a calculation that will shorten the one-year lifespan as compared to a person who does not smoke for about 13 years. For example, people who smoke at the age of 20 and who smoke for 40 years will have a shorter life of about three years than those who do not smoke. Furthermore, Smoking affects not only your health but also people with you. Especially if the wife or child have a long time together, the damage becomes bigger. Next, according to the statistics of the Ministry of Internal Affairs and Communications, the total damage caused by the annual fire is 135 billion yen. The fire caused by tobacco is about 10%, so it will be about 13 billion yen annually. Regarding fire fighting costs related to cigarettes, tobacco is reigning at the top in the ranking of causes of actual fires, and it is wrong that fires caused by tobacco will be reduced by reducing the consumption of cigarettes. Also, of course, human injury, injury or death caused by fire can not be ignored. Lastly, There are 600 ingredients in cigarettes. Many of them are carcinogens. Exposure to the mouth, esophagus and lung tissue can cause serious damage to these chemicals. This damage can cause serious health problems including emphysema and cancer.

II

There are some causes of country not make a cigarette sales cancellation. First, there is economic interest. In many countries, additional taxes are imposed on tobacco products, tax revenues have increased considerably. Prohibiting smoking, this income disappears, it is obliged to reduce government expenditure and increase deficit. According to the survey, about 2,200 billion yen can be collected with cigarette. Tobacco tax revenue is about 2,200 billion yen annually for the total of the national and local governments, but if you include the treatment expenses for tobacco related diseases, the tax revenue is estimated to be more than doubled. In addition, preventing companies from selling tobacco means that people working in cigarettes production, distribution and sales will lose their jobs. There are more than one hundred company which selling cigarette and there are about 45000 workers. When tobacco be illegal, the 45000-worker lost their job and become unemployed.

Next is tobacco offers the possibility to informally talk with colleagues and bosses at work during a break. This will allow us to build closer ties with them or to discuss work and personal issues not directly related to current work. Without discussing some abstract ideas, it will be difficult to enter the boss's room, but it is perfectly OK while smoking. With cigarettes, you can fill in conversation gaps more easily without looking like you do not say anything. Without tobacco, cigarettes can affect the consciousness that some people feel that it is easy to find words and quieter

when speaking in an uncertain, restricted, strained situation. This is also true for alcohol that usually promotes sexual intercourse.

Finally, there are people who claim their smoking right. Some people think that the harmful effects of tobacco are exaggerated, and that the prohibition of tobacco sales should protect the rights of smokers who are infringed by the constitution. Some people think Just as there are people who enjoy dangerous but extreme sports, adults have the right to enjoy their benefits at their own choosing and to take advantage of the disadvantages that are against it. and We need to made a policy to protect people who do not want to smoke but It is too much to argue that tobacco sales are prohibited at all. Whether the law is established or not is not a scientific basis such as harmfulness or dependency but whether the consensus of the people is obtained or not is the key. Regarding tobacco, tobacco is not prohibited by law because there are many citizens who think that whether you smoke or not is personal freedom, even if you hurt your health. There is a possibility that the law such as the Tobacco Control Law can be done if the people's consensus of you should not smoke is obtained, but it seems quite difficult at the present time. The prohibition of all kinds of toxicants does not really work very well as it is proved to be an alcohol ban in the US in the 20's and the current global drug ban. It makes it difficult to control the black market which requires considerable government resources to suppress. Black trading with illegal luxury goods is a catalyst for the formation of an organized criminal organization and tends to cause various crimes.

III

There are some physical effects of tobacco. First, main effect is causes the disease, in addition to nicotine, tobacco smoke produced by burning tobacco leaves contains more than 7000 kinds of substances including carbon monoxide. Among the components contained in cigarette smoke, there are hundreds of hazardous substances that are certified as hazardous substances, of which about 70 are carcinogens. It contains toxic hydrogen cyanide and dioxin, among others, tar, nicotine and carbon monoxide, and various irritating substances are the major health hazards. The majority of the carcinogenicity of cigarette smoke is due to the particle phase that has become a gas containing carcinogens. The gas phase contains carbon monoxide and respiratory tract irritant as well as volatile substances which are the source of the remarkable smell of tobacco smoke. After that, if you smoke, it will be more susceptible to diseases such as cancer, respiratory diseases, cardiovascular diseases, gastrointestinal disorders, periodontal diseases and more. Cancer is caused by absorption of carcinogen contained in tobacco smoke from the lungs. Among them, lung cancer, esophagus cancer, mouth cancer, pharynx cancer, laryngeal cancer, the relative risk with nonsmokers has more than doubled. Respiratory diseases are caused by the organs touching the smoke of the cigarette directly, and it is likely to be affected by chronic bronchitis, emphysema, bronchial asthma and so on. Cardiovascular diseases are caused by carbon monoxide that promotes arteriosclerosis, nicotine that raises blood pressure, etc. It is likely to be affected by angina pectoris, myocardial infarction, etc. Gastrointestinal disease is caused by nicotine acting on the autonomic nervous system, lowering gastrointestinal blood flow and causing a decrease in the function of tissues, which is more likely to be caused by gastric ulcer and duodenal ulcer. Periodontal disease is more likely to be caused by poor circulation of gums by the action of nicotine. Also, smoke in cigarettes not only affects the person who smokes, but also causes serious health damage to smokers who smoke their cigarette smoke around the smokers.

Next, sucking smoking causes health damage not only to the person himself but also to those who do not smoke. Exposing tobacco smoke other than the person who smokes is called passive smoking. Chemical substances in smoke smoked by tobacco smoke are also present in smoke emanating from the burning part of tobacco products and smoke exhaled by smokers, and secondhand smoke is a cause of lung cancer causing people who do not smoke It will be one. Since sidestream smoke does not pass through the filter and its combustion temperature is low, it contains more harmful substances than mainstream smoke. In addition, the causal relationship between second-hand smoke and lung cancer is scientifically evident. Although there are several mechanisms for the occurrence of cancer, the cause substance and the developmental process of the lung cancer morbidity of the smoker himself and the lung cancer morbidity due to the second-hand smoke are similar. Also, although it is not enough now for nasal / paranasal cancer and breast cancer, it is thought that there is a causal relationship with second-hand smoke. In addition to cancer, passive smoking has been found to have effects such as ischemic heart disease and stroke.

However, by quit smoking now or by doing that, you can greatly reduce the possibility of long-term health damage. Ten years after smoking cessation, the risk of lung cancer is reduced to about half that of smokers, and the risk of lung cancer is reduced to about half compared to smokers, and the risks of oral cancer, esophageal cancer, stomach cancer, laryngeal cancer, bladder cancer, cervix It is reported that the risk of cancer also decreases. There are also reports that smokers have shorter life expectancies by about 10 years than those who do not smoke lifelong. However, it has also been reported that an increase in the risk of death from tobacco can be avoided if smoking cessation before the age of 35. It is also suggested that smoking reduces daily living behavior and the risk of developing dementia. Smoking cessation increases the possibility of longevity in health. Diseases of cardiovascular equipment

other than cancer and respiratory organs have been shown to significantly reduce the risk in about a year after quitting smoking. Furthermore, not only the health side of the smoker himself, but also the people around him can stay healthy due to the reduction of fire and the reduction of health insurance costs.

IV

In conclusion, there are many pros and cons, effect and causes. I think the country must act with the risk of selling cigarettes. I believe people know the danger of cigarettes. After that, if they are not, we have to teach how addictive they are. Most people think that they can stop smoke when they want but most people cannot stop on one's own will so we have to teach it more strongly. Finally, they have to know it is not only you who are influenced by cigarettes. Even if you do not smoke at home, it hurts your family and friends. You need to thinking about these dangers and you should choose smoking or not.

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Disparity of Wealth in the Philippines

Sae Suzuki

There exists a great disparity of wealth in the world. Now, this disparity can be easily seen in the Philippines. The GDP per capita in the Philippines is about 2891 (USD). Even though it is not really low in regards to world ranking, the wealth disparity and poverty existing in urban areas, especially in Manila, makes the disparity easily seen when visiting the Philippines. This is further compounded by the fact that the population density of the Philippines is high, but the distribution of the population is uneven with a clear majority of people living in metropolitan areas. In addition, people who are 0 to 14 years old account for about 34% of the population and about 19% of population are people who are between 15 to 24 years old, also about 37% of the population are people who are 25 to 54 years old. On the other hand, people who are 55 to 64 years old accounts for only 6% of population and people who are over 65 years old accounts for about 4% of population. Also, according to PSA, the wealthy class earn three times more than the average in the Philippines. On the other hand, the poor class earn one third of the average. Furthermore, the income gap between the top 10% of the wealthy class and the bottom 10% of the poor class is 1000%. Also, according to Pinoy Money Talk, rich people are indeed a rarity, with rich families numbering only 20,000 or 0.1% of the total 17.4 million families in the country. The seriousness of this wealth gap cannot be denied, but with the severity of the problem how can this issue be truly resolved? In this thesis, I will first look at the structure of Philippine society to understand the inherent differences that exist between the different social classes. I will then look at the underlying causes of this disparity to potentially identify areas that can be targeted so that this disparity can be solved. Finally, I will look at three different areas that could help alleviate the pressure on poorer families caused by the wealth gap in the Philippines.

I

Now, I'm going to explain about three types of classes which are the poor class, middle class, and wealthy class in the Philippines. Poor class refers to the group of people that don't have adequate housing, sufficient money, or things that we think are necessary to live normally. Even if they have a house or something, their houses are not like our houses and they don't have enough to live a normal life. The middle class refers to the group of people that have housing, food, and general thing enough to live in the Philippines comfortably. However, it does not seem enough when we compare with Japan standards, and also there is a big difference from the wealthy class in the Philippines. By which, I mean the wealthy class is the extremely rich. I can't explain truly how rich they are.

First, I will explain about the poor class in the Philippines. When I went to the Philippines, I saw a lot of people who wore dirty clothes, slept on the road, and walked without shoes. According to ADP, in the Philippines, 21.6% of the population live below the national poverty line. Furthermore, according to a Philippines MDG report, there are 19.3% of people who are looking for another job even if they have a job. This is due to the salary not being sufficient. In addition, 94.1% of children who are poor can go to elementary school, and 86.1% of children can go to junior high school. However only 48.5% of children can go to university. So, it means that when they get older, they can't go to school, thus making it difficult to gain the necessary skills to be successful. Furthermore, I will write about my experience in Philippines. I went to a place called Smoky Mountain. There I saw people who live in refuse. And the children were looking for things they needed to live, in a dirty river. Their houses were really close to that river and are very old. Furthermore, there was no distance between the houses. And the air smelt strong. They wore old clothes and no shoes. When I saw this situation, my heart hurt. It is not sad, but I can't explain exactly how I felt.

Next, I will explain about the middle class in the Philippines. According to PSA, the average annual family income of Filipino families was approximately 267 thousand pesos. In comparison, the average annual family expenditure for the year was 215 thousand pesos. Hence, Filipino families have savings of 52 thousand pesos a year, on average. In addition, according to a Philippines MDG report, 97.6% of children who are middle class can go to elementary school, and 93.4% of children can go to junior high school. But 61.9% of children can go to university. It means there are still children who can't go to school even if they are middle class. Furthermore, I visited one household when I went to the Philippines. I first thought they were from the poor class, but in actuality they said they are part of the middle class. The reasons why I thought about it was that their house was too small to accommodate the 11 people who lived there, and they told me a lot of things. For example, that they didn't have enough money to live. The mother did volunteer work, for which she can get 2kg of rice and some vegetables. Furthermore, I asked her "what is the most important things to survive?". She told me, "They are relationships and attitude." After that I asked one more question, "Why is it not money?" she told me, "We can live even if we don't have enough money. If we have a lot of money, I want to share the money with the people around me." Then I couldn't ask anymore. I also thought there are many things that are more important in the world. I also thought that I don't know what is important even though I have a good education, money, and enough to live.

Finally, I will explain about the wealthy class in the Philippines. According to a Philippines MDG report, decile dispersion ratio is 21.1 to 18.5 in 1985 to 2012. It shows that the ratio of the income between poor class and the wealth class. Furthermore, 99.3% of children who are in the wealthy class can go to elementary school, 99.5% of children can go to junior high school, and 93.0% of children go to university. It means that almost all the children who are wealthy can go to school. In addition, other data shows the more people earn, the more people tend to have a strong educational background. Furthermore, I went to Poveda College. The students in that school are from wealthy families. They talked about a lot of things with me, for example, they have maids and drivers. And they live in high rise apartments. While there I asked a girl "What is the most important to live?" she said to me, "Money. Because if we don't have money, we can't live." I think it is right. But I can't say it with a sincere heart because I asked the same question when I visited people who were in the middle class, which made me reevaluate what is important.

Overall, there are three types of classes in the Philippines. There are many differences in their life. I desire a more equal world because I thought that it is the happiest for everyone. But now, I notice that I was wrong. People have their own ideas about happiness even if they are poor. On the other hand, there are too poor to have choices. It is real. I don't know the correct answer, but I think they need to raise the lowest line. In the future, I think then poor people will decrease. Because the Philippines is advancing. But I think the poor class will not go away. Because I can't imagine that they can live like us. However, I think that the government should bring more public schools for people in the poorer class. And the government should increase income tax. After that they can do infrastructure improvement to increase efficiency. In addition, I hope that no matter what happens, their happiness will not break.

II

I will write about some of the causes of the Disparity in wealth in the Philippines. Because I think finding and thinking about causes is very important to know the background in the Philippines. I will focus on three causes which are history, geography (population increasing and urbanization), and the government.

First, I'm going to write about the history in the Philippines. Especially, I will focus on one former president. In the 1960s, the Philippines was one of Asia's industrial powerhouses. However, the Philippines became one of the poorest non-communist governments in Southeast Asia in the 1970s and 1980s. And the Philippines was mismanaged by Marcos. The Philippines is now sometimes referred to as the "sick man of Asia" and a "Latin-style banana republic in the South China Sea." Now, I will focus on Marcos. The Philippines had an economic crisis in early 1970. This was caused by, in large part, the consequence of the reckless spending of government funds by President Marcos in his reelection bid. Furthermore, the Philippines was richer than its neighboring countries. While the Philippines had growth rates of around 2 %, other countries which are Singapore, Malaysia, Thailand, and China enjoyed accelerated growth. As a former American colony, the Philippines could have made cultural affinities with the United States, including the widespread use of English. But Marcos didn't capitalize on them and he ruled incompetently and crookedly from 1965 to 1986. These are one of the reasons why history has affected the Philippines' disparity of wealth.

Next, I will explain about the population increase and urbanization which are also causes of the disparity of wealth in Philippines. According to PRB, there are 80 million people who are under 15 years old in the Philippines. It accounts for 37% of the population in the Philippines, which means the population growth is really fast now. Also, the urbanization is progressing quickly. The National Statistical Coordination Board estimates that about one third of the population (nearly 27 million Filipinos) lacked the \$275 (USD) required annually to satisfy food and non-food basic needs. The Philippines is also among the world's fastest urbanizing countries. About 47% of the population is living in urban areas, compared with 31 percent in Thailand and 16 percent in Cambodia, the country has more than 200 urban areas that have populations of more than 50,000, noted the country's Commission on Population. By World Bank estimates, these urban centers could expand to 600 by 2020, largely because high levels of rural poverty are pushing people into the cities.

Finally, according to Crowdhnews, another cause includes corruption in the government which brings social unrest, limitation and theft of national funds for public service, concern of unequal distribution of assets, and very little financial growth for non-capital owners. In addition, the current constitution of the Philippines discourages 100% foreign ownership over an asset in the country, limiting investors interested in working there, leading to fewer job opportunities for people. But most experts will also say that there actually are enough jobs for all but there is a lack in the number of qualified individuals. This is due to a lack of education induced by limited income. And if ever there are jobs, salary rates between regions differ, even if prices of commodities is the same everywhere. In some places, the minimum wage is about Php 250 (about \$5 (USD)) per day. This is the same reason why other factors that contribute to poverty are elevated. These is a lack of stable jobs, malnutrition, education, and other unlawful activities. However, what about the middle class? They suffer high income taxes. Income tax is 32% of their monthly

income which is 2% higher than what corporations are taxed on. In fact, income tax in the Philippines is the highest among all ASEAN countries.

Overall, there are three types of classes in the Philippines. And there are many negative causes from a lot of surroundings. I think these causes are real. But it is not the only cause. I think if they want to improve their life seriously, they can do something. When I went to the Philippines, I felt they are satisfied with their life. Because as I said earlier, a woman who I met in Philippines told me, "If I get more money, I want to share money with the people around me." I was impressed with the woman's answer. However, it can also be said that they don't desire better lives. I think it is the biggest cause.

III

Finally, I'm going to write about three solutions. In fact, the rates of poverty is decreasing. However, the rate of decline has been very slow compared to other East Asian countries. Between 2006 and 2015, there was only a 0.9 % decline in poverty as per the international poverty line (\$1.90/day), while the East Asian countries including China, Indonesia and Vietnam have shown 2 to 2.5 % in poverty reduction. Now I'm going to focus on education system, job system, and infrastructure to solve poverty in the Philippines.

First, I'm going to write about education. Eliminating poverty must be done through reforming schools. According to Edutopia, educational institutions have to be reconsidered in order to solve poverty. Successfully educating all students to high standards is critical to ultimately eliminating poverty. For example, developing curricula that are relevant and meaningful students' lives and draw on their experiences and surroundings. In addition, there is a need to teach about classism, consumer culture, the dissolution of labor unions, environmental pollution, and other injustices disproportionately affecting the poor, preparing new generations of students to make a more equitable world. A boy who I met in the Philippines told me that he doesn't have school after lunch time, and students go to school in the morning or afternoon because that system can teach many students. It means there aren't enough schools. So they need more school and teachers. I suggest private schools should help them. The teachers in private schools have to share their education system and teach how they teach to others, what subject they teach and so on to improve Philippines' education levels.

Next, I'm going to write about employment. The Philippines is a dynamic and growing economy that has performed better than a number of its peers in South Asian on a number of economic and social indicators. From 2008 to 2014, GDP growth has averaged 5.4%, outperforming both the OECD average and a number of ASEAN economies. The Philippines has a relatively young population, which will be a key source of future growth and competitiveness. However, youth unemployment sits at 16% with many young people facing a number of challenges in finding work after they leave school. I think introducing work-based training programmes is important to promote skills development opportunities. Furthermore, setting up a countrywide skills development programme that gives access to technical and vocational training to youth in poor rural areas and provide them with hope and opportunities for decent work.

Finally, infrastructure is the combination of fundamental systems that support a community, region, or country. According to engineering, cities around the world have begun developing integrated approaches, by establishing transportation hubs, for instance, where various transportation elements - rail, bus, taxi, walking and bicycle paths, parking lots - all conveniently meet. Now, Mr. Duterte who is the president in the Philippines plans "Build, Build, Build" initiative, the country is looking to spend \$180 billion to renovate and build airports, railways, roads and ports over a 6-year period. A major project of "Build, Build, Build" is the Metro Manila Subway, the country's first underground mass-transport system. They are going to spend \$6.9 billion to develop the 13 stations. The plan aims to significantly cut travel time around the city. And it is expected to carry some 370,000 passengers annually upon its partial opening in 2025.

Overall, there are three solutions that I found. I think these solutions are important to solve poverty. But my opinion is that education is the most important to solve the disparity of wealth. Because when I went to the Philippines, a boy who is by the middle class told me that I have school after lunch. So he doesn't have school in the morning. I think if there are classes all day, they can study more and more. And we know education is really important to solve the poverty. It needs much time to learn. However, there are classes all day, if people are part of the wealthy class. So their education system is no equality between wealthy class and poor class. So I think government should think about it, and also I think if there is private school for the poor class or middle class, it's going to help them.

IV

In conclusion, I think making an equal society between the wealthy class and the poor class is very difficult. And I think learning about the disparity between the wealthy class and the poor class is important, but seeing the reality firsthand is more important. Because I thought people who are in the poor class are unhappy about their

life. However, it's not true. I felt they are proud of themselves even if they don't have much money. I think we should listen to their opinions about their community. I talked before that when I asked a woman who was in the middle class told me if she can get more money, she would share her money with people around her. I realized I have to find other policies except sending money, food, and so on. It's easy to make a new policy but it's difficult to execute that policy. We have to care about their good community and protect it. However, we have to improve their lifestyle at the same time. So I can't find a perfect solution to fix the disparity of wealth now. But I can try something that I think I have to do.

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Japanese Farmlands Sara Morimoto

In the prewar and war days of Japan, in the rural areas they held the power that landowners dominated. The peasants who cultivate the landlord's land area are paying royalty for landowners nearly half of the harvest, so they could not buy enough items. As the domestic purchasing power is small, the market remains narrow, so Japan has advanced into war with the search for markets abroad. The second agricultural land reform is "all low-lying works of absent landowners walk in four small towns in the village landowners, in Hokkaido walking in four towns, and in prefectures all the smaller ones that exceed 1 town walk walk 12 towns in Hokkaido, 3 town walk walking prefectures In the case of small-scale construction etc." The government forcibly purchased the farmland at a low price, and it was sold to the peasants actually cultivated. As a result of implementing agricultural land reform, around 1940 the proportion of homebrews in arable land area was about the same as the lowlands but around 1950 the homebrew became about 90% of the total. Recently I often hear that rice production rate in Japan is decreasing with news. At the same time, I heard that Japanese ecosystems are changing compared to the past. In this thesis I will look at the reduction of agricultural land and change of ecosystem pros and cons, Causes, finally solution.

I

I first saw the rice production rate declining and thinking that something changed in agricultural land and looked at the change in the farmland. Recently there has been reduction of the proportion of agricultural land in Japan. Approximately 2.75 million hectares of agricultural land in Japan were destroyed by diversion to factory land, roads, residential lot, etc. Approximately 1.5 million hectares were also developed for agricultural land development and landfill disposal. As a result, in 1992, 5,165,000 hectares of farmland was reduced to 660,000 hectares in 2015.

II

Next, I will explain recent ecosystem change in Japan. Japanese red frogs are steadily decreasing in recent years. Also, Ominashi, Kawaranadeshiko, Kikyuu, Tsuriganeninnjinn are decreasing too. Also, recently Japan has an increasing number of alien species. So, I would like to talk about pros and cons of farmland loss and ecosystem change. The merit of the reduction of agricultural land is that as the farmland decreases, new houses and the like will be built, and the town will be revitalized by the population increase. The demerit is If agricultural land decreases and the self-sufficiency rate drops more than ever, importation can be relied on if the world situation stabilizes, but if the importing partner country disappears, there is a possibility of falling into the food crisis. The merit of ecosystem change is that in recent years the habitat distribution areas of large mammals such as deer, deer, Japanese wild boar and wild boars living in the forest are expanding. It is thought that this is due to warming, the snowfall amount decreases, the snowfall period becomes short, and the survival rate of the wildlife becomes high. The demerit of ecosystem change is as the number of alien species increases, it will greatly affect native species, such as eating native species, robbing habitats of native species, crowding with the closely related native species, making new hybrids.

III

Next, I would like to talk about causes of agricultural land reduction and ecosystem change. At first, causes of reduction of agricultural land. Due to aging and income problems, agricultural land reduction is progressing. People who were agriculture take old age and they cannot work. Also, young people do not want to do much agriculture, because agriculture is a work involving weather, income is not stable. Also compared to labor force, the problem of low productivity is also a cause of agricultural land reduction. Next, causes of ecosystem change. Due to nature decreases in urbanization, deforestation, river improvement, coastal reclamation and revetment construction. Also, due to the development of means of transportation, pests and foreign species have come into Japan. Next is the causes of ecosystem change. The first major cause is the development of urbanization, deforestation, river improvement, reclamation of coastal areas and construction of revetment, field improvement of agricultural land. For example, deforestation changes the forest light and moisture environment, divides forests and deprives the living creatures that need vast forests, also once the amount of water increased due to heavy rain, the plants covering the surface of the earth were being washed away. In such a place, seeds preferring a bright environment were the place of growth, but the inherent creatures were lost by the construction of levees and dams. The second cause is the declining population. Ecosystems that have long been involved with people, such as Satoyama, live in a large number of species dependent on the environment maintained by human activities. In Satoyama, the trees are appropriately thinned out due to use as firewood, bright forests are kept, and Maki and Kayaba are bright grassland environments maintained by grazing, grass cutting, burning, etc. In Japan, humid and humid, humans as long as there is no activity, plants of high height such as Sasa and trees grow quickly. These bright forests and grassland creatures have coexisted with humans for a

long time. Such living things and ecosystems are about to be lost as people's use decreases. The third cause comes from overseas. For example, wild plant seeds and cereal pests mixed with imported grain, mammals traded as pets, fish, amphibians, reptiles, insects and various animals, flower beds and flowers. Many of these alien species can survive only under breeding, but they may hamper the growth of living things, such as eating native seeds or removing species habitats.

IV

Finally, I would like to talk about solution. At first, solution of reduction of agricultural land. As one of the solutions, "Law on Promotion of Agricultural Land Interim Management Project" should be firmer. It means borrow conflicting agricultural land such as cultivation abandoned land, and borrowers will lend farmland borrowed together as a whole. Standing between the farmland and the carrier and managing the farmland responsibly until a borrower is found, for that reason, if there are agricultural lands that have been renounced for many years due to abandonment, management mechanisms will be implemented as necessary, also, it is normal to involve more labor and expense than maintaining cultivated land to change abandoned cultivation to a state where it can be cultivated, so people must cooperate with local communities and local governments to solve the problem of farmland. Next is the causes of ecosystem change. It is important that foreign species that may have an adverse effect on ecosystems etc. be unnecessarily not put in a non-natural distribution area. If people are already in a non-natural distribution area and there are exotic species people keep, it is absolutely necessary not to throw away because they do not go out into the open air, also if foreign species outdoors, it is important not to extend it beyond that point.

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The Gap between Poverty and Wealth in the Philippines

Seita Sawasaki

The Philippines was a colony of Spain for more than 300 years. Spain started to colonize the Philippines in 1565. During the Spanish rule, there were a lot of cultural changes such as new food, a lot of Spanish words. There are still many cultures of Spain in the Philippines. After this colonization, the Philippines was a colony of the USA for about 50 years. The Philippines was colonized by countries which are developed countries now for about 400 years so the problem is a serious poverty in the Philippines. After world war II, the GDP in the Philippines was about 3 billion USD in 1960 but it became about 310 billion USD in 2017. They have developed a lot but they need to develop more compared with developed countries. Also, the gap between wealthy and poverty is one of the biggest problem in the Philippines now. I believe that the gap needs to be solved for the Philippines to develop more. In this graduation thesis, I will write the causes of the gap between poverty and wealthy, compare the Philippines and Peru how they are developing now and list some resolutions to mitigate the gap between poverty and wealthy in the Philippines.

I

According to MDGs report, the amount of income poverty in total population in the Philippines was 25.2% in 2012. The amount has been getting better to compare between 34.4% in 1991 and 25.2% in 2012 however a quarter of people are still income poverty. On the other hand, according to Pinoy money talk, the average income of people who are called high income segments is 200,000 pesos. This number is about 20 times as high as the average income of people who called low income segments (income poverty) It can be said there is a big disparity between high income groups and low-income groups. In this chapter, I will explain three causes why there is big gap between high income groups and low-income groups and some examples to support my statements.

The amount of income is certainly related to level of education. If people have high level education, they can get high income. According to MDGs report in Philippines, in 2011, the average of wage which people are no grade completed was 141p per a day. If people graduated elementary school, their average income is 186p per a day. If people graduated high school, their average income is 246p per a day. However, If people graduated college, their average income is 598p per a day furthermore, the average of wage which people were postgraduate was 1,137p per day. The average income increases greatly to graduate college. There is big gap income between low education attainment and high education attainment. Also, according to the MDGs report in Philippines, in 2011, approximately 93% of children who are in high income groups went to high school. In contrast, only 48% of children who are in low income groups went to high school. From both of dates, people can't earn enough money because of low education attainment and people can't have high education attainment because of poverty. It can be said there is negative chain in the society of Philippines.

People can't earn enough money if people have job because the average amount of income is low in Philippine. The income is not enough to live, even people have a regular job. It means people have a job but people need other job to get more money. According to the MDGs report in Philippines, the percentage of underemployment was 20% in 2012 so one fifth of people seeking although they have a job. In 2012, the unemployment rate was 7.0% in Philippines. According to the OECD, The unemployment rate of EU was 10.5% in 2012. So It can be said that it is not so high percentage because the unemployment rate is smaller than EU. So people don't lose their jobs so much however 20% of people are seeking additional works and 25% of people are income poverty. It can be said that people have job and there are not so many unemployed people but they couldn't get enough income. so It can be said that the amount of income is not enough to live.

One of three people have agricultural jobs in Philippines. According to the country STAT Philippines, the total number of employment was 38.74 million and the number of agriculture jobs employment was 11.29 million people in 2015. So the share of agriculture in total employment was 30% It means about one of three people have agricultural jobs. Furthermore, the average of agricultural wage was 267p per day in 2015. This is the same income that the low-income group earn. So it can be said that a lot of people who are low income group have agricultural jobs. The amount of average wage is almost same as average income which people who are homeless. According to the Business Mirror, the average income of people who are homeless is 100~300p per day. So, farmers in Philippines can't earn enough money to live and one of three people have agricultural jobs. It can be said that one of cause would be the amount of farmers and the low amount of their income.

II

According to The World Bank, the percentage of Poverty headcount ratio at national poverty lines was 25.8% in Peru in 2012 and it was 25.2% in Philippines in 2012. The amount of percentages were almost same in 2012.

Furthermore, in 2016, it was 21.8% in Peru and 21.6% in Philippine. The amount of percentages were almost same again in 2016 and both of percentages were decreased. It shows same decline of poverty. In this chapter, I will compare the country between Philippine and Peru.

The proportion of poverty in rural area and in urban area are nearly same between Philippine and Peru. According to the Peru Reports, in 2008, the percentage of rural poverty was approximately 68% and the percentage of urban poverty was about 25% in Peru. According to the Focus on poverty, in 2008, the proportion of rural poverty was about 45% and the proportion of urban poverty was about 20%. Comparing the percentages between Philippine and Peru, the percentage in Peru was a little higher than the percentage in Philippine. However, the proportion of rural poverty in both of countries were higher than the proportion of urban poverty in both of countries in 2008. It can be said there are more poverty in countryside than city in both of countries and there are gap of income or jobs between them. Generally speaking, a lot of people who live in rural area have more agricultural jobs than people who live in city. For there reason, there are gap of poverty between rural and urban areas in both of countries.

According to the Worldometers, the number of population is 105,716,215 in Philippine but the total of population is 32,359,075 in Peru. The population in Philippine is three times more than the population in Peru. The amount of population is totally different. Also, According to The World Bank, the percentage of people who lived under national poverty lines has been decreasing since 2004 in Peru. The number was 58.7% in 2004 but it fell down to 20.7% in 2016. On the other hand, the percentage has been going up and down since 2004 around 24% in Philippine. It means it has been no big improvement in Philippine. Although, there were big difference of amount of poverty between Philippine and Peru in 2004, in 2016, the percentages of poverty became same amount. There were economic boom and it makes to fall the rate of poverty in Peru. Also, the difference amount of population might be related to the change amount of poverty.

In conclusion, there are some similar and different points between Philippine and Peru. The amount of poverty and distribution of poverty were very similar between both of countries in 2016. The number of poverty has been decreasing dramatically in Peru. On the other hand, it hasn't been moving like Peru in Philippine. I suppose that the government in Philippine can imitate how the economic growth and the decline of poverty were happened in Peru.

III

According to the statistics times, the place of the world GDP ranking in Philippine was 36 places in 2016. Also, the growth of GDP in Philippine ranked fourth place in 2017. Although the economy in Philippine was developing, there are still many people who is living under the poverty line. It can be said the gap of worth between poor and rich people is very big in Philippine. In this chapter, I will show the resolutions to mitigate the gap between poverty and rich people.

The education for children is definitely related to the amount of income in Philippine. According to the MDG report in Philippine, about 98% of people who are in high income group went to high school. However, there are only 48% of people who went to high school in low income group. Furthermore, according to the save the children, 11.1% of children from 5 to 14 years old are engaged in child labor. Also, 9.7% of teens from 15 to 19 year are already married. It means there are not enough opportunity for children to go to school and have a education. So, Government in Philippine needs to make opportunity to let almost all children graduate at least high school and to support their families to avoid that their children become important labor force for the families. Then many children would get more income than before.

The farm produce needs to change to valuable products. According to the country STAT Philippines, the average income of farmer in Philippine is 267p per a day. The number is in low income group. Also, according to the Philippine Statistics Authority, in total labor force, the amount of all employment was 41% and the amount of agriculture was 11% in 2016. In all unemployment, the amount of people who had agricultural job was about 30%. It can be said about 30% of people were living low income group in 2016. According to the Philippine Statistics, The amount money of agricultural export was about \$1,300 million in 2017. On the other hand, the amount of agricultural exports was only 8% in total exports. Also, The amount of agricultural import was twice as much as agricultural exports in 2017. They needs to change the quality and worth of agriculture in Philippine and they need expand their products for global. Also, they need to make more markets in the Philippine and try to reduce agricultural imports.

Government in Philippine needs to regulate the system of tax. According to the Japanese government, 45% is the highest income tax in Japan and 5% is the lowest number of income tax. According to the PWC, the highest number of income tax is 35% and the lowest amount of tax is 5%. Although, the minimum number of income tax is same, The maximum proportion of income tax in Philippine is 10% less than Japanese tax. Although, the minimum number of income tax is same, The maximum proportion of income tax in Philippine is 10% less than Japanese tax. The government needs to change the system of income tax to mitigate the burden of the low income group. On the

other hand, they need to get more money from high income group. Then the government makes the gap between rich and poverty people smaller.

In conclusion, it can be said there are a lot of problems from many different angle. Firstly, the education is the most important things to improve the problem which low educated people can't get enough income. Secondly, in fact, there is very big gap between workers and farmers. The farmers need to expand their products to get high income. Finally, the government need to change the system of tax to be fair their income or to make small the gap between rich and poverty people.

IV

In conclusion, I believe that mitigating the gap between poverty and wealth is the most important for the Philippines to develop and grow the economic more. There are three main causes which are all related to the jobs and incomes. The differential of income makes the gap between poverty and wealthy people and the gap of income caused by the enrollment rate. If people have higher education, people can get higher income. Also, the Philippines and Peru had a similar percentage of national poverty line in 2012 and the poverty has decreased very a lot in peru however the poverty line in the Philippines did not change so much. Resolutions of these problems are that the government of the Philippines needs to change the education system that all children can go to school and the Philippines needs to adopt the way of mitigating poverty that other countries did and these are the long term solutions. As a short-term solution, changing the system of income tax is one of the way to make the gap between poverty and wealthy smaller. I believe that the Philippines is developing now and will continue the growth but if there is still the gap between poverty and wealthy after they have developed, it is not the perfect result. Therefore, they need to try to develop the economy and country and also they need reduce the gap between poverty and wealthy people.

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Agricultural Chemicals with Our Lives Serina Teraoka

Since 1930, agricultural chemicals have been aids for farmers to increase crop production. And now, these became necessary to farming, especially pesticides. According to the Worldatlas, 40% of pesticides are contributed to herbicides, 17% to insecticides, and 10% to fungicides in the world. Also, these days, these pesticides are used in other industries to remove the invasive plants, clean weeds, and control algae growth in bodies of water. In this essay, I'd like to describe three countries' current situations regarding biocides, including China, United States, and Japan. Nowadays, a wide range of chemicals are used in the world. However, many problems are caused by these chemicals at the same time. According to "Teach the Earth," 3.2 million tons of pesticides are used each year. On the other side, 2.2 million people are at risk due to exposure from these agricultural chemicals. Moreover, pesticides cause bad effects to environment. According to "Global Healing Center," one pesticides factory released over 40 tons poisonous gas to produce some pesticides. So I will talk about three problems of agricultural chemical. These days, the rate of produced agricultural chemicals are increasing in each country. According to "World Data," nitrogen fertilizer production raised about 40 million percent from 2000. On the other hand, the food which produced as organic is also increasing. Recently many people are interested in healthy food like fruits or vegetables especially in young generation. However, these fruits and vegetables contain many chemicals, and using agricultural chemicals are very common for farming. In Everyday, we face danger from agricultural chemicals. And finally, in this essay, I'd like to talk my three solutions to protect our life from pesticides.

I

First, I will explain about the current situation of agriculture chemicals of China. The Chemical type is pesticides. In China, these are used commonly in agriculture. And also, China is the number one country which consumer of it. According to "Worldatlas," about 3,981,548,455 pounds are paid for agriculture one year. However, in these current uses surpasses safe levels. From this information, experts suggest that this current connects with environmental pollution and human health problem. Moreover, many problems are happened by Chinese agriculture. For example, soil contamination. It's one of the big problem. But they have to treat with these fertilizers such as pesticides which creates a never-ending cycle of agricultural additives. Then, the fertilizes are escaped into the river. This current situation is the cause of water pollution, and also it kills fish life.

Second, I will explain about United States. Agricultural chemicals are used widely in the United States to increase yields of agricultural crops. Moreover, the US is known as the second largest consumer of agricultural pesticides. Every year, the US uses about 850,984,332 pounds annually to use it. And then, in this country, it's very common to use pesticides for parks. Also, these are used in household. What is more, experts found that traces of chemicals in American rice is more than in Japanese rice. According to "Worldatlas," most waterways are polluted by some chemical substances including pesticides. Furthermore, the 90% of wells are contained agricultural chemicals. As one of the reason, many agricultural chemicals are incomplete water soluble and can leach to groundwater or runoff to surface water.

Third, I will talk about Japan. Japan is 9th largest agricultural user. However, according to "OECD Pesticide Reviews," Japan is the number one of using agricultural chemicals in the world. There is the reason that this country has a huge pollution in such a small area. The pollution levels are significantly more concentrated. Also insecticides are widely used against shield bugs in Japan, but the government is doing nothing. For example, in 2007, the nations of EU made a role that regulate the use of agricultural chemicals. Nevertheless, Japan didn't obey the role, and continue using large amounts of chemicals such as pesticides. As the reason, can give one current situation that aging of agriculture. They need reduction in cost and labor. They can make crops easier by using agricultural chemicals.

II

Agricultural chemicals cause many problems to environment. Especially, water pollution is big problem. According to government of Canada, 85-90% of freshwater are used for agriculture in Africa and Asia. And also, 67% of world's fresh water are withdrawal, and 86% is consumed. In other word, these large percentage of freshwater are polluted by agricultural chemicals. Moreover, most of these waters are returned to river or the ocean from the fields. This means that dissolved contaminant will eventually pollute lakes, rivers, and the ocean. The situation also influences to sea animals such as fish. For example, the synthetic pesticide are toxic in low concentrations to fish and these kill many fishes.

Agricultural chemicals do damage the plant, and it causes reduce crop yield. Most of farmers use pesticides to increase crops yield, but in fact do the opposite. Chemicals include high nutrient content such as nitrogen. However, this substance bad effect to crops. Cause of chemicals, the leaves change the color to yellow or blown. It can cause

the leaves of the plant to die. In addition, chemicals also kill the soil. These decrease the quality of the soil, and exacerbate harvest uncertainty. According to "BioFlora," Dr. Elaine who is a soil scientist said that there are not enough beneficial soil organisms to protect nutrients in the chemicals. From this, using agricultural chemicals to improve plant nutrition is opposite effect.

Finally, agricultural chemicals also have negative points for human body. Now, there are many food which used pesticides in the supermarket. However, according to the "Consumer Reports," about 1015 people found that pesticides are a concern for 85% of Americans. Furthermore, the average of American's body have the traces of about 29 kinds of pesticides. But actually, about 30% of chemicals which include to food have residuals from the agriculture. And these chemicals aren't known the effects to human body. As the risk from pesticides, there many diseases such as diabetes or Alzheimer's disease. Especially, cancer is the most biggest. The study have that about 30 different types of cancer relate to pesticides.

III

First, providing technical assistance to farmers, local governments, and homeowners to pesticide use. according to "Learning Library," there are 42 million households in America. And they are increasing 17 % at home or in a community garden in five years. Especially, young people are most increasing of all generation. However, they don't have enough knowledge about farming. Additionally, the gardening spaces was increased about 30% by people living in urban area.

Secondly, choosing organic food is also one of the solution. Now, most of food contains agricultural chemicals, and many people buy those at the supermarket. Especially, fruits and vegetables. Also there are organic food which isn't use any chemicals. However, according to "Consumer Reports," those can cost an average of 49 percent more than standard produce. Like this, if organic produce is too pricey or not available, their analysis shows that people often have a low-risk conventional option. Organic is always the best first choice. So people should more focus on health.

Lastly, providing enough information about pesticide use. According to "Consumer Pesticide," farmers have to show where the fruits or vegetables were grown for consumers by low. Who is using chemicals, where, when, how, what pesticides are being used, and why. However, the information sometimes doesn't enough for them. It's important to them to know about food they're buying. By knowing the food contains, they can control their food nutrition by themselves. Also they can avoid to get many food which contain chemicals.

IV

In conclusion, there are three countries have many problems of current situations. In China, water pollution is caused by using too much chemicals. In US, agricultural chemicals became common tools for household. Now, from these, agricultural chemicals are close our life. However these have many negative effects to people and the environment. And I suppose many kinds of agricultural chemicals will be more developed and farming will become more easier to farmers in the future. However, growing technologies at the same time of increasing negative effects for the earth. Moreover, there are many negative points to environment and human. However, most of food are included some pesticides, and we eat these food everyday. But most people don't know the food which we eat everyday has a lot of dangers for our health. And also, they don't know pesticides cause many bad effects to environment. Now, using pesticides is very common for many farmers, and it is thought that very useful and help a lot to them. But we have to solve the problems of pesticides, and it's important to know about many bad effects from agricultural chemicals. And also, there are solutions to save our life in everyday. In the future, agricultural chemicals will more increase than now. According to "FAO," the rate of nitrogen fertilizer use will increase about 38% until 2030. From this, it's difficult to stop the rate of agricultural chemicals, but we can change our life to live healthier with them.

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Cow Energy Shigeyuki Fujii

In the producers of methane, cows are the biggest producers in the world. In 2012, the amount of methane was 768000 tons, it deserves approximately 25% of all methane on the planet. Methane decreases the oxygen that you need to breathe, this means it will be able to cause deterioration of consciousness, suffocation, frostbite for our skin and some bad influence to our body (for example, dizziness, loss of coordination, nausea, vomiting, weakness, and headache). Cows are looks like the key to our diet but they are giving bad effects to us (chapter 1). However, there is possibility that this situation is reversed to other good thing by cow power. Since the industrial revolution, human have been using fossil, gas and coal as main energy. In the future, using those non-renewable energies will reach the end, because of the global warming problem, running out those energies in the world and high cost. Thus, we need significantly effective renewable energy which can account for all electricities used. (chapter 2) On the other hand, there are some kind of renewable energies like wind energy, tidal energy and solar energy. I myself am especially interested in cow power although the other energies have good points each other. hydropower is known as the most used renewable power of the world according to power Technology, so if cow power can be better than hydropower, cow power would be the best. This thesis will list about cow power, how cow power is made and human can use, and comparison with hydropower.

I

In this chapter, I will illustrate what cow power is, with the positive point and the negative point. Cow power is one of the transforming greenhouse gases into renewable energy, actually almost of methane is emitted from cow burps, it deserves 26 % of united states' total methane emissions. However, the machine that is called "backpack" can change from the methane from cow belches to electricity. According to Ricardo Bualo, if a cow wears the "backpack", it can collect about 300 liters of methane from cow's mouth per day, moreover, it can be used to operate 100 liters of a refrigerator a temperature that is between 2 and 6 degrees for all day long. On the other hand, when even cows defecated, it can be energy as a source of green energy. It has been used as a manure traditionally, but cow dungs are used to produce biogas. Also, some rural areas like India and Pakistan are providing it as a stable and renewable source of electricity, round 4 cows dung can provide fuel to cook a day (5 hours per day), so the cow power has the 2 different ways.

Pros of cow power are efficiency and sustainable as well. In California, they reduced 12000 tons greenhouse gas between 2003 to 2010 that deserves 40000 cars off the road, also in the other case cow power produced electricity that deserves electricity of 3000 homes and saved 2 million\$ in energy costs to farmers each year. It means so efficiency because although it helps the ecosystem of the world like reducing bad effect for the planet, it makes some profits like as generating electricity and biogas. Moreover, cow's life didn't change, we don't need to take space and we do not need to care about weather or season, so it's easy to work on the cow energy and sustainable acting.

Cons of cow power are high cost. For example, if we use "backpack" to a cow, installation of the cost is 500\$ per a cow, and operating cost of a cow power is approximately 11000\$ to 51000\$ as total costs. It means it's unlikely that farmers work on the cow power, they need some supports for possible to do. In contract, they can reduce the cost of electricity like California and help the earth ecosystem problem like reducing greenhouse gas and methane, so I think it's likely they can get some supports from the government and some social groups in the future. Actually, Mr. Obama was used to be suggesting the usage of "backpack" that is one of the cow power, so the cow power will be used in the future, probably.

II

In this chapter, I will explain how cow power is made and human can use . First of all, cow power can provide electricity as a saving money, instead of emitting methane. Actually, almost of methane is emitted from cow burps, it deserves 26 % of united states' total methane emissions. However, the machine that is called "backpack" can change from the methane from cow belches to electricity. According to Ricardo Bualo, if a cow wears the "backpack", it can collect about 300 litres of methane from cow's mouth per day, moreover, it can be used to operate 100 litres of a refrigerator a temperature that is between 2 and 6 degrees for all day long. In California, they reduced 12000 tons greenhouse gas between 2003 to 2010 that deserves 40000 cars off the road, also in the other case cow power produced electricity that deserves electricity of 3000 homes and saved 2 million\$ in energy costs to farmers each year. It means so efficiency because although it helps the ecosystem of the world like reducing methane, it makes some profits like generating electricity and biogas. Moreover, we can get energy from a cow dung, this effect is also one of the enormous energy. It has been used as a manure traditionally, but cow dungs can be used to produce biogas. For example, over the last 25 year, the amount of biomass consumption has increased as an important energy source in Denmark.

According to The Official Website of Denmark, to convert from now's energy at power stations to biomass at power station will help the target of Denmark that accounts for 30% renewable energy by 2020. Also, some rural areas like India and Pakistan are providing it as a stable and renewable source of electricity, round 4 cows dung can provide fuel to cook a day (5 hours per day), so the cow power has the 2 different ways.

However, if farmers want to use it, they must be big farmers because anaerobic digesters system (the system that changes from manure to biogas) uses the large farm. According to EPA, farms should have at least about 300 cows before setting a system to easy to capture additional revenue through this process. Second disadvantageous is making use of cow power takes the high cost. For example, if we use "backpack" to a cow, installation of the cost is 500\$ per a cow, and operating cost of a cow power is approximately 11000\$ to 51000\$ as the total costs. Although farmers have got to pay this cost per a year, their average salary is around 45000\$ (but the average of them is getting low) It means it's unlikely that farmers work on the cow power, they need some supports for possible to do. In contract, they can reduce the cost of electricity like California and help the earth ecosystem problem like reducing greenhouse gas and methane, so I think it's likely they can get some supports from the government and some social groups in the future. Also, "backpack" can save the cost of electricity, so it will cover the problem of cost with some supports from the government or the governmental stuffs. Actually, Mr Obama was used to be suggesting the usage of "backpack" that is one of the cow power, so there is the possibility that cow power will be used in the future as the one of main renewable energy.

III

As the last, this chapter will compare cow power to hydropower with similarities and difference. The similarity of cow power and hydropower point are quite a few however, both of them can produce efficiently. For instance, the other energy like wind power needs a windy day, in other words, it depends on days, but hydropower and cow power don't need care about it. Of course, tidal power which is one of the hydropower is good at a rainy day, but basically, waterfall power and turbine are relating with dam, therefore, the amount of water is limited, hydropower doesn't depend on days. In addition, both of them can fulfil 2 things which are an advantage. First stuff is just producing electricity, second stuff is helping earth or us. For example, cow power can reduce methane that is bad for our environment, hydropower's case, it can keep water and control the amount of water for us and just in case like a dam. Nevertheless, installing hydropower like a dam can be bad for the environment and influence the ecosystem. For example, we need to build roads to carry materials like woods and concrete therefore we need to open mountain and forest where a lot of animals live in.

The first difference point of cow power and hydropower is cost. In hydropower case, the cost of installation is high (the average cost of setting dam up takes about 50 to 100 billion dollars), especially dam and the system of machines which are installed in the sea as one of hydropower. This is because, if that hydropower isn't set up specifically and durable, it's easy to be broken by water, moreover hydropower has to withstand the Tsunami and downpour. However, hydropower does not need the cost of management and maintenance, compared to the other energies which are including cow power. As a conclusion, building hydropower needs a lot of money but mainly dealing water is free and totally safe, compared to the other energies like nuclear and coal energy. In contrast, cow power is the opposite of it, cow power doesn't take cost so much (it is about 500 \$ per a cow). On the other hand, for maintaining the backpack (which is one of cow power machine that can produce electricity. I listed in essay 2) and managing biopower plant request high cost, especially the cost of management of biopower plant. In the backpack's case, it takes 11000\$ to 51000\$ as a total cost of operating per a cow in a year, but in the biopower plant case, an even small scale of it needs 3000\$ to 4000\$ per kw which is twice as much as managing hydropower.

IV

In conclusion, the cow power will be the big producer of energy for us from the biggest producer of methane. Now, there is no plan that the cow power will be one of the common renewables and even use "backpack", except the biogas cow power. It is being used now even in Japan (but especially Denmark), and according to International Energy Agency, the biogas from cow will be over the quarter of world demand for transportation fuels by 2050. However, some agriculture colleges are working on the cow power project, they are using the all of electricity from the cow power to do agriculture. After all, we need to get some supports from some social groups and the government at first for users of the cow power, because to get some subsidy the best way to work on the cow power. Also, cow power is necessary energy for our future and it will be one of the important sources of energies like that it's used in all over the world because it can reduce methane although it can make the benefit and it's already been being used in some countries as a biomass energy. I think we should consider more about the problem of the needed land of cow power and be done by trial and error. On the other hand, it has the other disadvantageous point, the problem of the cost will be solved by obvious evidence. Those things are why I believe it. Although hydropower has a similarity of cow power,

I recommend cow power with 2 reasons. First of all, cow power doesn't have negative point for an ecosystem, compared to hydropower. It can keep water for us and emergency while producing electricity, but building dam can affect forest and mountain. Secondly, the cost of maintenance of cow power is high but the cost of setting up is significantly different with building hydropower. installing the backpack is also quite expensive but this is a price which farmer can buy. On the other hand, building dam needs about 50 to 100 billion dollar which is like that the government has to cooperate with this stuff.

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Japanese Childcare and Canadian Child care Mari Ito

Every country has its own system of childcare and different problems caused by the system. In Japan, frequently observed problems are; lacking of the number of nursery schools, lacking of teachers, and claims for building nursery schools said by neighbors. Canada has different types of problem; non responsible owners, less community children obtain, and expensive monthly fees parents bear. They are mainly caused by culture, system, and environment in those countries. Statistics shown by United Nations reported that approximately 27% of total population around the world was children, and population growth in Canada remains high rate. In this essay, first of all, I'm going to introduce types, systems and details of childcare in Canada and Japan to find out the characteristics of each childcare. After I will define pros cons of each of them, and present solutions that could solve those negativities effectively.

I

First, the systems of child care in Nova Scotia, Canada and Japan, need to be understood and compared. In Canada, according to statistics Canada, there are 3 types of child care which are home daycare, daycare center, and private care. Each of them covers about 30% of children who use nursery services. In Nova Scotia, there are not so many large kindergartens, and instead of those, home daycare is common. It is done in a house privately and about 4 to 6 children are accepted per house. All children of age about 3 to 5 years old play together. Parents drive their children in the mornings and pick them up in the evenings. To do home daycare, people have to go to school to learn how home daycare works, but if they have no time to do that, they can take online courses to start or keep doing home daycare. In Japan, nursery school is the most popular institution people leave their children at. Children are divided into classes with children of same ages. Some schools have their own pickup buses, but some others require parents to drive their children as well. People have to have a license to be a nursery teacher in schools.

Second, the schedule of home daycare service differs in each country. In Nova Scotia, it depends on each individual. For example, they have a outside playing time, nap time, snack time, lunchtime and inside playing time. At the outside playing time, they go out to their yard or parks to play freely. And at the inside playing time, they watch shows on TV, play with toys and do some crafts. What to do and what to eat is up to children and the owner, so the time children play outside or inside can be longer or shorter, and what to serve for lunch and snacks depending on the weather or how they feel. In Japan, the schedule is determined in detail because every nursery school have more number of children than home daycare in Canada, and there should be no confusion. They value acting and playing as a group, so they have time to read a book, sing a song and play together. They have nap time, snack time and lunch time as well Canadian daycare. As a part of outside playing, they often go for a walk with classmates and teachers.

Finally meals and snacks served for children are also different in each country. In Canada, home daycare, the owner makes lunch and snacks for children and it can be decided by the owner. Also, because it depends on individuals it could be a easy, unhealthy menu or a healthy menu, but the owners have to give efforts to provide healthy meals and snacks. In Japan, there are both types of nursery schools that require parents to have their children bring lunch boxes, and provide school lunches. When a lunch or snacks are supplied by schools, the specific guideline for school lunch is decided by the Ministry and Health, Labour and Welfare, and it involves how the environment should be kept clean, the importance of food and eating for children, and the regulations of nutritious components. It makes sure that children stays healthy, and are in the safe environment.

II

First, I will look at drawbacks and benefits of Canadian childcare. For benefits, because the scale of communities is small, owners can watch children well and specifically. The owners can pay more attention to children and know well about them. Some owners even check on how often little kids excrete in a day and report to their parents, so that parents can relieve more to entrust their children and learn well about what their children did in the day. Another positive point is that parents and owners could be closer than they are in Japan. Since they are taking care of fewer children and have more time for each one of the children, the owners can report a lot of information about them to their parents and have more time to communicate. Also, because schedules are up to the owners, they can provide events where parents and they have meetings and have conversation with one another. For negative aspects, it is relatively expensive to put children into a daycare service in Nova Scotia, Canada. It depends on province but for a licenced center or approved in home daycare, the cost can be from 27\$ to 37\$ per day, depending on child's age. That means per month, it costs approximately 810\$ to 1,110\$. In Japan, although it depends on individuals, the expense is about 200\$ to 300\$ per month. One more problem about childcare in Canada is that the owner could not be managed by a organization, and can be doing inappropriate childcare. The weak organizations cause problems in

some daycare places because they don't regulate them enough in terms of meal plans, schedules and the environment. The owners could have no snack time, unhealthy lunch, less outside playing time. However parents have to rely on those places if those are near to their houses, because another daycare place could be far away which means they have to make longer drives in the busy mornings.

Next, I am going to present pros and cons of Japanese childcare (nursery schools). As positive points, nursery schools have got controlled systems and behaviour of the teachers. Organizations or municipality observe and regulate the schools so that problems of being low quality in what children eat and do are more unlikely to happen. That makes parents being able to feel relieved. Furthermore, parents could prepare food for them so that parents get to manage their children's eating habits because most of the nursery schools require parents to make children bring a lunch box for lunch. As negative points, the number of nursery schools is lacking and there are many "waiting children" to enter schools. Japan has been facing and concerned about aging population and it is really needed to provide a friendly environment for young generation to bring up children. However, the issue about "waiting children" causes more worries about having babies, and making the social issue worse. Furthermore, because in Japan it is crowded with buildings and houses, nursery schools could not built easily, and make people around it concerned about that. When people try to build nursery schools, they have to get agreement from people around the place they want to build the nursery schools, but they do not admit them to do that because they care about loud noises children make and more traffics. Also, lacking of teachers is one of the largest problems. People think that being a childcare worker is a hard work and takes a lot to deal with children. Moreover they only get a few payments out of that. Nursery school teachers have to be people who like children and have enthusiasm to look after kids and tell values, knowledges and kindness to them, so people who could not adapt themselves to that personality should not be a teacher. This aspect and the issue of a few salary make that problem bigger.

III

To solve problems about childcare in Japan, imitating childcare system in Sweden would be one of the solution. Japan has now serious problems that can be solved almostly by government. In Sweden, it is obligated to nursery school to provide seats for new children in 3 to 4 months by a law. Also, Sweden provides mighty supports for working women. For example, to enable parents to raise their children until their first year at home, government gives 80% of one's salary during a childcare leaving. Furthermore, the right to go back to the same working place is guaranteed. In addition, the government sets a law that certifies fathers to have childcare leavings. This system saves rapid increase of "waiting childrens", because parents can take a break on their jobs temporarily with ease so that they can have time to take care of their babies or young children by themselves.

For issues of childcare in Canada, setting up strong organization can help settling those problems. The owners are doing whatever they want in their places now because the regulation and observation put on childcare owners is weak. The organization should provide a new rule telling individuals that the chief of child care organization comes to see how each home daycare is ran by them secretly and periodically. Also to make them responsible for reporting what they did, what they provided for lunch and snacks in a week would be effective. To solve the problem about the less experience children can obtain, the organization should hold some events that are done by collaboration of some childcare groups. Children can see other children and can experience expanded human relationships and activities. To protect children from the unfavorable environment, researching other home childcare facilities one another is important to learn from them and be restricted by being monitored.

IV

To sum up, there are many differences in system, schedule and meal plan between childcares in Canada and Japan. Overall, Childcare workers in Canada have more freedom for what to do and what meals and snacks to serve to children, so childcare workers in Canada have wider right to determine what children do and eat. Japanese childcare, because it is not in the scale like home daycares, is restricted by government or organization. Unlikeness of the scale of home daycares and nursery schools creates those differences, and the differences are mainly created by the dimension of the country. Nova Scotia, Canada is too large to build nursery schools in every certain areas because it would be whether the government or organizations have to build a lot of it, or the school range would be so wide because of less population density, which can cause inconvenience. Childcare in Japan and Canada, both have negative sides and positive sides of childcare. For Canada, they have got better size of community to have conversation, and watch what children are doing, but because the organization is not strong enough, schedules or meals are not regulated well in some daycare places, and do unfavorable jobs to earn money easily. For Japan, they have strong system and organized group so that parents can be relieved. However, entering nursery school is difficult now because of lacking of the schools and teachers who work there. To solve the Issues of Japanese child care, which are caused by the unsatisfied system and non supportive laws for working parents, Sweden could be a great role model that Japan should

imitate. Many benefits and supports for nursery schools and parents are provided by the government. In Canada's case, child care problem is appeared by the unique type of common child care style, home daycare. To solve this situation, establishing stronger organization can manage individual home daycare services and make it regulated and better.

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Food Waste Culture of Developed Countries

Miku Ishikawa

As of today, according to the Food and Agriculture Organization (FAO), approximately 1.3 billion tonnes of food around the world is wasted every year. Some of the wealthiest countries in the world have the highest amounts of food waste, including: Canada, Japan, and China. These countries are diverse with economic power and productivity. It is clear that the wealthier countries become, the higher the overall food wastage becomes. Some of the causes of increased food waste include wealth, apathy, and poor waste management. The results are very serious and if these conditions continue, there will be detrimental consequences. For example, these problems lead to climate change, pollution, and overall health risks. For example, there is no place to deal with garbage, which will adversely affect the earth. Fruits and vegetables show the most abandonment rate among them. There are solutions to these problems to prevent or to at least decrease food waste in the future.

I

I will describe the differences in each countries' problems. Canada, Japan, and China all waste food at extremely high rates. Also, the number of household waste is increasing. One of the main reasons why this phenomenon has become normal is because many people do not think or care about this situation because they have enough food in their country, so there is no real public opinion or concern that has changed food disposal behavior. In Canada, about 900,000 Canadians, 37% being under the age of eighteen, rely on the assistance of food banks each month. A large portion of the food waste relates to the disposal of unfinished meals. In a survey as to why people dispose of potential food, 57% of people said "food goes bad too quickly", 44% of people mentioned that "it is past its expiration date." Furthermore, 19% of people said, "cooked too much," but only 11% wasted their food by not finishing their meals. Japanese consumers are often described as "finicky," insisting on the perfect appearance of products and iron-clad guarantees of freshness and safety. One of the possible solution is recycling. However, there are not enough recycling facilities to impact the issue of food waste. What there is of recycling ends up feeding pigs for the most part. About 80% of food waste is incinerated, not recycled, and Koichi Takahashi, director of the recycle facility Japan Food Ecology Center in Kanagawa Prefecture, wonders how taxpayers would feel if they knew that ¥2 trillion yen per year pays for incinerators that consume perfectly edible food. The Chinese food system shares characteristics of both high- and low-income countries. Its supply chains stretch long distances, but it continues to rely on under-resourced small-scale farmers. A small portion of food, about 2%, is lost during the transportation stage of the food supply chain. Most food is wasted at the consumer stage, outside of Chinese homes. Restaurants account for most food waste, with 19% of food waste attributed to these establishments and about five to 7% of food wasted in homes or canteens. Chinese agricultural production is based on small-scale production, with 184 million farms growing crops on an average of 0.7 hectares of arable land. The small-scale of many farming operations contribute to postharvest loss due to inadequate infrastructure and a lack of access to robust storage facilities.

II

In Canada, there are 47% for each home, 53% for restaurants. There will be 6 million tons of waste, which will be 183 kg per household in a year. Households waste \$1.456 worth of food annually. It accounts for about 40% of the annual quantity produced in Canada. The 80% of those food waste is leftovers. In Japan, 3 to 4 million tons from the food industry and 2 to 4 million tons of food waste from each house. Approximately 18 million tons of food is disposed of every year. Among them, 500 to 800 million tons of food can still be eaten. These figures account for about 40% of the national food production rate. About 10 million tons of garbage is discharged annually in Japan, and the number is the same as the amount of rice the Japanese eat in a year. In China is about 10% out of about 55 million tons wasting. China is wasting more than 38 million tons of food, mainly grain. China often threw away especially due to diseases related to food. And China occupies 20% of the world population, but the arable land area is only 7%.

Second, I will describe the landfill site problem. These countries are caused by infrastructure shortage, low technology level, low investment in food production. Food waste is a waste of resources including water, land, fuel, capital leading to the unnecessary emission of greenhouse gases. These are the causes of global warming and climate change. There are too many food wastes consumed by people, so the landfill disposal site is almost gone. Besides, there are not enough lands and people are sending their garbage to developing countries.

Finally, I will talk about illness and concerns caused by food waste. Since food waste is being sent to developing countries, the organic matter emitted from them generates methane gas that gives 25 times more damage to the environment than carbon dioxide. In addition, there are causes in which foods are found out of food waste send to developing countries, and sickness is caused by eating it. As a result, about 600 million people worldwide eat

wasting food and get sick and 42 thousand people die each year. Diarrhea is a common illness, with 550 million people being sick and 230 thousand people die. These food wastes cause over 200 diseases from diarrhea to cancer.

III

I will write today, There are some problems with food waste in developing countries. These problems are very serious problems in the world. All these problems are made by us so we could find a solution by ourselves so I am going to find the solutions for food waste. According to the increasing food waste problems in developed countries. On the contrary, the amount of production is also increasing. Especially, the food waste in developed countries has a lot of problems. This is due to the fact, one-third of the food produced in the world for human consumption every year (1.3 billion tonnes.) This includes 45% of all fruit and vegetables, 35% of fish and seafood, 30% of cereals, 20% of dairy products and 20% of meat. Besides, that as the main reason, the waste disposal plant is increasing. In this essay, I will explain about three possible solutions to the problem of food waste in Canada, Japan, and China including increasing food waste each household and restaurant. For example, the solution of how to decrease food waste problem, how to solve to do these problems for the future and so on. First, I will explain about Canada's problems. Canada has a food waste problem of household (183 kg per Canadian.) Households waste \$1.456 worth of food annually. About 47 percent of food is wasted at home, with the other 53 percent of waste occurring through the food chain, what is referred to as the "value food chain." There are four facts in Canada. To much-wasting food every year. The kind of vegetables is the wasting especially potato. About \$31 billion of food waste, each Canadian house are wasting about \$28 per a week and About 183 kg of solid food per one person, equivalent to more than 6 million tonnes. Second, I will explain about Japan's problems. In Japan, people wasting about 18 million tonnes of food in a year. Among them, 5-8 million tonnes of food are still can eat. this is about 40% of food production in this country. Also, the Japanese restaurant is pursuing an idea of the high-quality meal so that is a matter of food waste. There are three facts in Japan. They are wasting especially, from the restaurants. There are lots of restaurants and family restaurants there. Japan does not have a waste disposal facility. (no more) And they are wasting about 40% of the country's food production.

Finally, I will describe China. China wasting more than 38 million tonnes of grain, mainly rice and barley. And China has lots of people. There are problems of the population. Also, from 2010 to 2012, about 11.5 percentage of the mainland population was undernourished. China has three facts about food waste. Mainly, nutrition-deficient people stand out. (11.5%) This country is high population so the percentage of food waste is also high. The kind of grain is the most wasting in China. In conclusion, each country has different problems but these problems are very similar and we have to solve these problems as soon as possible. There are three types of solutions here. Mostly, in Canada and Japan has the same problems so it can find the same solution and these problems are very serious problem so we have to solve as soon as possible. The amount of food waste is increasing year by year so they do not have any more waste disposal facility, and we can think about the best-before date and use-by date when we make the solution. These are very possible solutions for us because these are can be familiar in our life so we should execute as soon as possible for us to survive in the future.

IV

These three powerful countries have severely affected the environment of the earth. However, there is time to prevent further damage. There needs to be stronger public awareness and activism that changes the food waste behavior of wealthy countries. We just prepare whatever is needed and that we are able to consume. For example, we are wasting food by producing more crops than we actually eat. Typically, surpluses are profitable for exporting, but it can also lower domestic food prices. As a result, people can easily discard food due to cheap cost and no consequence. These countries are causing and facing serious problems. Japan and China are wasting almost the same amount of food every year and the numbers are increasing every year. The various reasons for wasting food consist of expiration dates and abundant amounts of food. If countries do not change their behaviors of wasting food, the environmental problems will get worse. The negative effects of food waste connect and cause other problems, especially climate change and pollution of hazardous substances that can poison people and other lifeforms. Changing human behavior is very difficult; therefore, the best solution for food waste is for governments and private businesses to develop better waste disposal and managements systems. Pigs, chickens, worms, and bacteria are very reasonable sources to reduce wasted food. These living things can reduce human garbage without harming the earth. They naturally occur in the environment and are balancing agents organic waste. Waste emitted by these animals becomes fertilizer and can be managed efficiently on large scale by human intervention.. If these cycles work efficiently, there will be little concern for landfill problems, expenses, or damage to human beings, and it will lead to sustainable food waste reduction.

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You Need Just One Aluminium Can to Listen Whole Album in Your iPod

Misuzu Hayashi

Packaging is necessary product through everything. Packaging is used in many ways, including; transportation, package, gift wrapping. We use packaging our daily life include egg carton, bottle, board box. In the U.K., the 1.25 billion beverage cartons are used every year which could wrap the earth six times. Packaging has a big impact for us. It is first thing that you see and it influence buying decisions. Also, it can contribute global warming and pollution. UNESCO released the following information, "There are now close to 500 dead zones covering more than 245,000 km² globally, equivalent to the surface of the United Kingdom over 220 million tons of the plastic are produced each year. Waste material from across the North Pacific Ocean, including coastal waters off North America and Japan, are drawn together." Surprisingly, 80% of oceans pollution comes from packaging. However, when we buy the product, we do not think about how they affect the environment, some of them might but most of them do not. Long story short, packaging can destroy our planet eventually. We do not understand the consequences that happening today about what the packaging affect to the environments for example, oceans, lands, and the air. We using the packs everyday in someway and somehow. Do you buy a coffee or any drink? To make that coffee cups, 100 thousands of trees are destroyed. Is your coffee cup made from aluminum or steel? 7 millions of that types of coffee cups thrown away in just one day. This number is only in the U.K. and most of them are not recycled. Pop drinks or water bottle are basically plastic bottle. Most of them are hardly recycled. Producing packaging takes huge energy, water, oil and other natural resources. When we thrown away packaging, these natural resources are lost. After you use the packaging is the key to keep the environment protect from pollution and save living things include us, human being. However, we do not work greatly about that. Many animals living the oceans died or some species are threatened by extinction because of pollution caused by packaging that did not recycled or thrown away properly by us. In this essay, first, I will explain three major types of packaging; reusable packaging, recyclable packaging, and biodegradable packaging, to determine which type is the most sustainable packaging then, I will talk about the environmental effect of each different types of packaging: effect of reusable packaging and recyclable packaging, positive effect of biodegradable packaging, and negative effect of biodegradable packaging to getting know these packaging types more deeply. At the end, I will suggest that the three possible solutions to attack the problem of packaging; change the materials, keep on your mind 3R, and shift to "Go Green" idea.

I

First, I will introduce packaging types. One packaging type is reusable packaging, also known as returnable packaging or returnable transport packaging (RTP). This type of packaging can be cleaned and reused many times. Reusable packaging is made from durable materials such as glass, wood, paper. We created this amazing packaging long time ago, it have long history. For example, milk bottle patens began to appear in 1880s. Many companies use RTP for example, confectionery products manufacturers, food and beverage and more. According to Reusable Packaging Association (RPA's) survey, reusable packaging showed that 95% less produced solid waste, also reusable packaging type have other positive influence, including reduced waste management, reduced packaging materials costs. Example of reduced waste, also reusable packaging materials which listed, in Ontario, Canada, over 99% of refillable beer bottled are returned for deposit, this action dramatically reduces the need to produce new bottle which means company can save money. Significant benefits of this packaging type are sustainability and productivity.

Another type of packaging is recyclable packaging. Recyclable packaging made of materials that can be used again for example, glass, metal, and paper. Paper is widely used for recyclable packaging as secondary packaging, is the middle layer of packaging for example cardboard box, transit packaging, is the outer container during transfer between factory, distribution centre and retailers. Paper packaging have many varieties, include three major types of paper packaging; boxboard is the thin and lighter, commonly used to carry lighter items. This is the difference between boxboard and corrugated box that it does not have the wavy middle layer to add strength. Corrugated box commonly used to carry heavier items such as electronic goods. Remarkable characteristic of this box is it has several layers of paper fiber; a top and bottom layer called liner board and a middle layer called corrugating medium that give the strength. Paper bag used to carry groceries or retail items.

Finally, I will talk about biodegradable packaging. It would break down easily in soil or the atmosphere for example, plastic. Plastic is widely used for packaging because it is flexible, can be moulded into shapes, light, and cheap to produce. Imagine, plastic water bottle, plastic bag, plastic cup, plastic take-out containers. We often use plastic packaging. Plastic packaging is everywhere. Also, air in a plastic bag called modified-atmosphere packaging (MAP) is one of plastic packaging. Plastic packaging is considered recyclable, however, "plastic can be never recycled completely. After two or three recycles it becomes inferior in quality. A staggering 72% of plastic packaging is not

recovered at all; 40% is landfilled, 32% leaks out the collection system." says Melinda Watson, who set up Raw Foundation and recently awarded an Earth champion "Change Agent" award. Therefore, in this essay, plastic is categorised biodegradable packaging.

II

Now, I will talk about impacts of reusable packaging and recyclable packaging. Both reusable and recyclable packaging have similar positive impact on the environment such as saves energy to produce new packaging, reduces greenhouse gas emissions that contribute to global warming which helps sustain the environment for the future, reduces the amount of waste. The company in Las Vegas received an award from Reusable Packaging Association (RPA). The company realized those facts by using reusable packaging: 40%, which is \$8,400, material cost saved and \$10,800 cost saved in LED light packaging material which is bubble wrap and anti-static wrap. When you take a look at both packaging types separately, there are some interesting facts. It is said that paper and glass, aluminium can be used five to seven times and infinitely, respectively. Remarkable fact is glass can reused over and over without loss of quality; however, the majority of glass is thrown away. If people recycle newspapers, massive amounts of trees are saved. In America, weekly newspaper production uses 500,000 trees and many people don't recycle it. And that is just about newspaper, not included other paper products. And surprisingly, just one aluminium can save energy to run a TV for up to three hours and listen whole album in your ipod.

Secondly, I will talk about positive impact of biodegradable plastic. In summary, there are two significant points that save resources and cause less pollution. Biodegradable plastic helps save petroleum which is material of traditional plastic. Traditional one produced heating and treating oil molecules until they turn into polymers, representing 2.7% of America's petroleum consumptions. Biodegradable one produced by natural materials such as corn, sugar, and switchgrass. Another good point is it produces far less pollution because they can break down and don't cause dangerous chemical that can poison water or air. It produces less 68% of greenhouse gases than traditional one which based on petroleum. Also, it requires 65% less energy to produce than traditional ones.

However, the problem with biodegradable plastic cannot be broken down perfectly because it often mixed other non-biodegradable materials. When biodegradable plastic is produced, it should not be mixed with non-biodegradable materials but it does, for example, the typical snack bag categorized this type. It made by mixture of foil and plastic which means it cannot be broken down. In addition, people don't know how to segregate biodegradable plastic and traditional ones. Once these two plastic mixed together, it never be break down and landfilled or it may cause pollution ocean. According to National Geographic, more than five trillion tons of plastic debris are in the ocean around the world with 269,000 tons of them floating on the surface. It kills wildlife and destroys ecosystems. Another problem is that it often takes an extremely long time to break down and it may lead to serious problems to landfills and the ocean.

III

One solution could be using materials that friendly for environment. There are many different kinds of materials that used to produce the packaging. Plastic is the most used for it. Plastic is divided by two main plastics which are based on organic materials such as corn and sugar that is easy to break down into a molecule that's not harmful for the environment and petroleum based plastic that cannot break down. I talked about that in second essay. The company like to mix different materials and make one package because it's cheaper and lighter to transport but the problem about this packaging is it could never recycled and landfilled. They should shift to the materials that is friendly which means can be break down, recyclable or can be used to make new products such as glass, organic based plastic, aluminum and paper. However, it's hard that directly change the materials that the company controls. There are still way that we can do to attack this problem. Do not buy bad products that I mentioned. This would help the company to change their mind about the packaging. Choose products that shows the resources clearly for example, the note book or textbook that made from recycled paper and using organic based in and after used it up, recycle it then it will use to make another book.

The second possible solution that could solve the problem of packaging is do the 3R thing in daily life. 3R means Recycle, Reuse and Reduce. Recycling means using things that will be trash to make new goods to sold again. Reuse means finding a new way to use things that supposed to thrown away. Reduce means making less the amount of waste that we make. These 3Rs can help to minimize the waste that we make every day. Let's take look at example about glass. In Denmark, 98% of glass bottles are refillable and 98% of these are returned. That's the perfect example of 3R. This glasses are recycled with high percentage and reused over and over again. Also, reducing waste. Doing 3R is not difficult or cost money or take a long time. It's really simple and effective. Everyone can do that anywhere.

Finally, Going Green idea would help to make better condition of packaging for the environment. Going green is an idea that becoming more and more popular among the world, the main idea is a practice that can help more environmentally friendly decisions and lifestyle, which sustain future generations. Specifically, the solutions for this problem would be using product that can use over and over again for example, bring a shopping bag with you so you don't need to use a plastic bag. Another example is bring a bottle and don't buy a bottle of drink.

IV

In conclusion, I discussed about packaging focused on the types, advantages and disadvantages for the environment for each types, and three solution to use packaging effectively and gently for the earth. Three types of major packaging are mentioned at the begging of the essay. Those are made by different kind of materials, have different purpose and different characteristic. Each types have good points and negative points. I think we have to use packaging properly in order to determine which one is most sustainable packaging type for example, after used recyclable packaging, make sure to recycle, not throw away. People should understand each packaging types. We use variety of packaging everyday but how many people doing correct way after used them? Many people are not recycling packaging proactively. Also, company should shift the sustainable types of packaging which would reduce limited source to produce new packaging. What people should do is to shift "waste" to "reuse and recycle" after use packaging that create better environment for everyone in the future. In order to take an active action, people need to know that each type has impact on the environment both good and bad side. We cannot say which one is the best packaging or everyone should use only this packaging type. If technology developed to help solve the problem with packaging, people do not need to act in a proper way then it does not mean anything. For example, as I mentioned on the second topic; how each types of packaging affect to environment, it does not work properly no matter how the plastic is developed to not cause pollution if people do not recycle or segregate from petroleum based plastic when thrown away. Also, as I mentioned again, the majority of glass is thrown away even if it can use over and over again. Only 27% of glass was recycled in America in 2010. However, the rate of recycling has been rising in the last 30 years. I think that the people goes "go green" idea in the future and more company try to reduce packaging waste and people should try to solve problems such as pollution of the ocean and air, land filled because people should realize that we cannot ignore these serious problems which cause our environment make worst at some point then they should take action. At the end, I suggested the three possible solutions to make better situation of packaging. Each solutions are simple and effective for problems. I believe that the best effective solution is doing 3R because as I mentioned, you can do that whenever and wherever you are besides it does not any costs. The remarkable of this solution is sustainability. You recycled the products that may recycled before and it is also a part of go green idea. You are familiar with the word recycle but not with reduce and reuse. Even if you do not know these two, this idea still work out. But you better do this 3R cycle, not just one R because that affect more powerful. It seems such a small thing but packaging have an astonishing impact to us. Reconsider using packaging is the smallest and daily thing for the future.

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Natural Disasters in Vietnam

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Natural disaster cannot be predicted and there is a possibility that it can happen everywhere, especially in Asian countries as it is easy to occur. According to the United Nations (UN), Vietnam says it will enter the world's worst 10 among countries suffering from natural disasters. In addition to this, with a coastline of 3,440 km, Vietnam tends to encounter a wide range of disasters such as floods, typhoons, landslides and droughts. About 71% of the population and 59% of the national land are vulnerable to disasters, floods and windstorms are the largest number of casualties and the greatest damage. Furthermore, there is a common point about agriculture between the same equatorial countries. Vietnam and India is in the same equatorial country. There are some similarities and many differences between Vietnam and India. In this thesis, I will look at natural disaster that is occurring in Vietnam.

I

In this section, I will explain three types of natural disaster in Vietnam, including typhoons, drought and floods. One of the natural disasters of Vietnam is typhoons. Most typhoons occur from summer to autumn. The whole of Vietnam is located south of the Tropic of Cancer and extends to near the equator. For this reason it is strongly affected by the southwest monsoon. It is affected by the typhoon from July to November, especially in the central part of the country. Vietnam is a tropical country in the Southeast Asian monsoon climate with an annual rainfall of approximately 2000 mm. 80% of this amount of rain falls in the summer, flowing through the river. At the same time, the north and central part of Vietnam suffer from an average of 4 to 6 typhoons per year. But, recently is getting more bigger. On average, the northwestern Pacific features the most numerous and intense tropical cyclones globally. So Asian countries have so many typhoons. In addition, typhoon course is not the same each time. Continuing westward or stagnation due to the influence of the Pacific high pressure often leads to complicated pathways. A 300 meter long coastline in Vietnam is struck by up to 10 storms every year, killing hundreds, and even thousands of people every year. Every year seven to eight tropical cyclones are hitting the central highlands of Vietnam, usually causing floods and landslides.

Second of the natural disaster of Vietnam is landslides. Typhoon causes flash landslides and mudflows in mountainous areas, causing erosion and silting in the river bottom. Landslides occur due to heavy rain caused by tropical cyclones. Vietnam, especially the central region, are susceptible to tropical cyclones and seasonal wind. The cause of the main landslide is typhoon, heavy rain by monsoon, but earthquake is one cause as well. However, Vietnam has few earthquakes. Forestry is flourishing in Vietnam. Therefore, landslides are easy to occur. At least 54 people in Vietnam were killed in floods and landslides on October 12, 2017 in Hanoi, Vietnam, 39 people were missing because tropical cyclone occurred earlier this week. The heavy rain in the central and northern regions confuses travel in some areas and restricts missing rescue activities.

In the southwest summer monsoon from May to October, the warm air of the Gobi desert rises to the north, moist air flows into the inland from the sea and causes heavy rain. It is a place where rivers flood surrounding fields every year to a level of 1 to 2 meters. The Mekong River flows in Vietnam, flooding is likely to occur when heavy rain falls. In general, once every five years, a big typhoon crosses the mountainous area and reaches the lowland of the Mekong basin, causing extremely harsh floods in Vietnam. Vietnam, especially the central region, are susceptible to tropical cyclones and seasonal wind. Irregular rainfall distribution is the main cause of river floods. Floods in Vietnam in 2008 affected the north and central Vietnam, and the southern part of the three days heavy rain. The rainfall that began on October 30 was heavy for the first time in 24 years and it was the worst flood since 1984. At least 66 people in Vietnam died of the flood.

II

In this section, I will look at impacts of natural disaster in Vietnam for human, agriculture and economic. And I will decide which of the biggest damage for those three things. Firstly, I will talk about impacts of natural disaster in agriculture. Natural disasters have clear adverse implications for the agricultural sector, both damaging crops and agricultural infrastructure and also influencing cropping decisions. During the drought, salt water intrusion, when depleting the freshwater aquifer and absorbing salt water, restricts access to safe drinking water and adversely affects coastal crop production. The main damaged agricultural product is rice. Mostly, rice is double cropped in a year, and is harvested in the time around May and June, and October and November. The rice harvest season and the typhoon season are the same so it will be affected a lot. River levels are extremely low and at least 100,000 hectares of land is under threat, with as high as 500,000 to 800,000 hectares of rice producing areas expected, if the drought continues. In Vietnam, natural disasters caused by the climate of 2016 caused severe damage to food crops such as

rice of about 700,000 hectares. As a result, the production of rice was reduced by 800,000 tons, and the area affected by about 1.1 million people was at risk of food insecurity.

Secondly, it is an effect on human beings due to natural disasters. According to the Ahmed Fock National Director of the Vietnam World Bank, over 13,000 people were killed and property damages exceeded 6.4 billion dollars due to disasters over the past 20 years. One of the most direct effects of natural disasters is population migration. When the country is devastated by earthquakes and other powerful natural forces, many people need to abandon their homes and find evacuation centers in other areas. Apart from the obvious immediate risk of natural disasters, secondary side effects can likewise be damaging. As a result of serious floods, water stagnates, breeding malaria carrying bacteria and mosquitoes floating in water, and it will be further affected. Food is often short after natural disasters. As a result, food prices rise, family purchasing power decreases, and the risk of severe malnutrition and deterioration increases. Earthquakes, typhoons, and the hunger associated with hurricanes have enormous impact, especially on children.

At last, I will talk about effects of economic by natural disaster. Natural disasters such as earthquakes, floods, typhoons, and hurricanes can cause serious damage and adversely affect the economy. According to the World Bank, Vietnam loses 1.5% of GDP each year by natural disasters, hampering the social and economic development of the country. Particularly in terms of development opportunities foregone and, more recently, in exacerbating regional and occupational income inequalities and reinforcing poverty. For businesses, natural disasters destroy tangible assets such as buildings and facilities and human capital, and reduce production capacity. These adverse effects are fatal to companies and may be forcibly closed up. In addition, due to its high population density and high economic assets, risks from disaster damage in major cities such as Da Nang, Ho Chi Minh City, Can Tho, Haiphong and Hanoi will increase.

III

In this section, I will explain about the similarities and difference of agriculture in the same equatorial country between Vietnam and India. I'm going to look to use three perspectives; products, money and disaster. At first, I will compare agricultural products between Vietnam and India. Vietnam's the main agricultural product is rice. Other crops include maize, sorghum, cassava, sweet potatoes, beans, fruits, vegetables. The main products are Indian rice and wheat. India is the largest producer of rice and brown rice in the world, accounting for 20% of world rice production. According to FAO world agricultural statistics of 2010, India is the world's largest producer of major crops such as many fresh fruits and vegetables, fibrous crops such as milk, major spices, jute, millet and castor oil species. India is the second largest producer of wheat and rice, the world's leading foodstuffs.

Next, I will compare about money which includes exportation. At first is about Vietnam. In 1989, the first yields surpassed 20 million tons, exported 1.4 million tons of rice with the turnover of US\$ 310 million. Food production reached 39 million tons by 2007, exports 4.5 million tons of rice with sales of 1.7 billion dollars. Over the past decade, Vietnam has become one of the largest rice exporter in the world. Exports. In 2015 Vietnam exported \$185B, making it the 24th largest exporter in the world. During the last five years the exports of Vietnam have increased at an annualized rate of 18.6%, from \$77.3B in 2010 to \$185B in 2015. India exports 38 billion dollars worth of agricultural products in 2013, it is the world's seventh largest agricultural exporter and the sixth largest exporter. Most of its agricultural exports serve developing countries and developing countries. Agriculture, horticulture, processed foods in India are mainly exported to 120 countries including the Middle East, Southeast Asia, SAARC countries, the EU and the United States.

At last, I will compare about impacts on agriculture between Vietnam and India. In Vietnam, the rice harvest season and the typhoon season are the same so it will be affected a lot. Any change in monsoon trends drastically affects agriculture. The rise in temperature also affects agriculture in India. With Jharkhand, Odisha, Chhattisgarh alone, the rice production loss during a serious drought (about 1 year in 5 years) is about 40% of the total production and the estimated value is \$ 800 million. During the drought, salt water intrusion, when depleting the freshwater aquifer and absorbing salt water, restricts access to safe drinking water and adversely affects coastal crop production.

IV

In conclusion, there are three major types of natural disaster in Vietnam. There are many negative effects from typhoons will be very difficult to avoid. In other words, floods, droughts, landslides are secondary disasters caused by typhoons. Typhoons are really bad disaster because Vietnam has typhoon season so typhoon is an avoidable disaster. On top of this, there a lot of effects of natural disaster for each. Agriculture is connecting to economic. It means if agriculture affected and then economic is affected as the same time. Furthermore, there are some similarities and many differences between Vietnam and India. Mainly, the main products were same for both of countries. Rice was the main products in both Vietnam and India. Both are larger exporters. Typhoons are the worst disasters in

Vietnam. Typhoons cause not only primary disasters but secondary disasters such as floods, drought and landslides and disasters. Also, agriculture is the most worst damaged by disaster. Agriculture is connecting to economic. It means if agriculture affected and then economic is affected as the same time. Rice is the main products in Vietnam. They usually do rice crop for two or three times. It is more damaging than normal. Natural disaster affects a lot of things. Vietnam has many disasters such as floods and typhoons in a year. They need to prepare more than now. What can be said commonly in both India and Vietnam is increasing year by year because of the large production volume and the large export volume. And the difference between agriculture in both countries is the influence on agriculture. The types of disasters are different for each country so impacts on agriculture are not same. I looked from three different perspective. Products and money were same for Vietnam and India. However, impacts of agriculture was different.

Climate Change in the Philippines

Miyuka Satou

These days climate change is frequently in the world. Many researchers are paying attention to climate change. As greenhouse gases accumulate, the climate changes and has a dangerous effect on human health and the ecosystem. Also, climate change can bring changes that can affect our water supplies, agriculture, power and transportation systems, the natural environment, and even our own health and safety. If carbon dioxide can stay in the atmosphere for nearly a century, so Earth will continue to warm in the future.

I

The Philippines is one of the most occur climate-changing countries in the world. Disasters caused by climate change confound the production of fruits and crops, resulting in income loss and high food prices. Over the past four years, weather events have cost the Philippine economy an annual average of 0.3% of GDP. This essay will discuss the causes. The major causes of climate change in the Philippines mostly due to global warming. I will talk about 3 causes of climate change.

The first cause of global warming which is the main cause of the climate change of the Philippines is a greenhouse gas. Nowadays, the global warming keeps on going in the world, and that is a very serious problem in the world. Global warming is caused by the "greenhouse effect" and the greenhouse effect is caused by primarily by human activities. For example, fossil fuel use, deforestation, intensive livestock farming, use of synthetic fertilizers, and industrial processes. That will worsen global warming. After a start of the Industrial Revolution of the middle of the 18th century, the density of atmospheric greenhouse gas suddenly increased by use of fossil fuel by human activities or a decrease in the forest.

Next, I want to talk about the El Nino phenomenon caused next by global warming. It is a large-scale weather phenomenon occurring in the Pacific, and the El Nino phenomenon is related to an intense climate change, namely the intense changes such as rain, wind, a drought. It supplies the Equatorial Pacific Basin which is the warm epipelagic occasional movement from the West to the eastern Equatorial Pacific area along Peru and the Ecuadorian coast. Precipitation decreased by this phenomenon in the Philippines, and a drought was generated.

Lastly, it is said that the outbreak of the typhoon is caused by this global warming. The Philippines has a high seawater temperature, and steam occurs when I rise than 26 degrees because there is it in the place that is near to the equator. The steam gets cold when I enter the atmosphere, and it is said that I change into a cloud, and a typhoon is easy to be generated. In addition, sea level rises by 3mm under the influence of warming every year, and the sea surface rate of climb is the highest worldwide; have it pointed out. Typhoon Haiyan alone caused crop losses of 1.1 million tonnes and destroyed 600,000 hectares of farmland in 2013, costing the Philippine agriculture industry and small farmers an estimated US\$724 million.

In conclusion, I understood that the main factor of climate change was global warming from these. El Nino phenomenon and a typhoon are generated by global warming and lead to a climate change. In addition, as for the first factor of global warming, it becomes the problem by the deforestation by human activities that greenhouse gas is generated. For example, the burning of fossil fuels to make electricity, deforestation and using vehicle. The climate change brings adverse effects for various economic activities of the Philippines. The situation that the incomes of the harvest of farm products decreased as for the climate change, and a debt was filled with happened. Because there are many poor, the Philippines becomes a serious problem. Measures to reduce the use of fossil fuel to reduce global warming are necessary.

II

In the Philippines, they have various effects by climate change. Climate change is one of the most fundamental challenges facing humanity. That adverse effect has already been seen. I will talk about the effect of climate change in the Philippines, focus on agriculture and health.

Firstly, I am going to talk about how climate change impacts agriculture. Agriculture is most affected by climate change. FAO Philippine national team José Manuel Fernández estimates that the Philippines is now the 13 th largest population in the world with an annual population growth rate of 1.5%, with an estimated population of 105 million people. This means a greater threat to the country's food security. Filipino farmers working in the fields to produce food are caught in food insecurity and malnutrition due to climate change. Ludovico Gagante, a farmer in Guimaras Island in the central Philippines, harvested crops 3-4 times a year. Harvest from their 1 hectare land is usually sufficient for family consumption. However, with the climate change, it is even hard to achieve a successful cropping time. "Too much heat, too much rain has fallen, and the crop is rough," he said in words. Long-term heat brings about the growth of pests and destroys crops. If it is not fever, there will be too much rain to drown plants. The

farmers in the Philippines suffer extreme weather phenomena due to climate change. In Negros Occidental Province of the Western Visayas region, heavy rains and floods damaged the land of 917 hectares of rice. This disaster, affecting about 800 farmers in the six towns of the state, became clear from the data of the agricultural area field office 6 (DA - RFO VI). The amount of damage exceeded 11.4 million pounds, or 222,000 dollars. Also, the Western Visayas region suffered from long-term drought in the past three years. The El Niño phenomenon that hit this area from October 2015 to May 2016 affected approximately 90,000 farmers in Iloilo, Capiz, Antique, Guimaras.

Next, I will explain how climate changes effects health in the Philippines. "What we have found in the recent past is that climate change exacerbates the conditions that make it more favorable for diseases to set in," Dr. Fely Marilyn Lorenzo of the Commission on Higher Education (CHED). The Philippines was a hotspot of dengue in recent years. Dengue cases in 2015 increased by 64.8% from the previous year, and officials of the Ministry of Health (DOH) are attributed to climate change. Nationwide counts in the first half of 2017 decreased by 36.8% compared to the previous year, but dengue victims increased by 24.9% in Metro Manila. Metropolitan Manila in the Philippines has a high population density and is ideal for communicating diseases because stagnant water in poor areas with poor sanitary conditions will flow in the event of flooding. Climate-related health problems are an important issue such as water supply systems in rural areas where general infrastructure and services in urban areas are scarce. For example, the spread of infection of cholera and typhoid fever can be exacerbated by poor water quality, lack of electrical access, and improper hygiene.

Finally, Climate change adversely affects agriculture and health. Farmers are difficult to access food such as poor soil quality due to drought and landslides. Health hazards due to climate change are likely to cause dengue and other diseases.

III

The Philippines is the most vulnerable country against the effects of climate change. As the intensity and frequency of environmental disasters such as temperature rise, sea surface temperature rise, drought, typhoon, flood increase, climate measures are attracting attention. I am going to talk about solutions of climate change in the Philippines.

First, We should suppress air pollution which indicates Manila's excessive carbon emissions. GHG emissions in the Philippines increased from 6 to 10 million tons of CO₂ emissions in 1990 to about 29 million tons in 2007, with the country's economic growth in the past 20 years But it increased drastically. The biggest factor is that most people in the Philippines are moving by using a motorbike. The first solution is to use transportation rather than motorcycle. For example, a person close to the workplace when going to work should use walking or a bicycle. Also, measures such as turning cars into electric cars are necessary.

Next solution is stop to cutting down trees. The Philippine Parliament announced a study that about 123,000 hectares of forest cover is lost each year. As long as forest regeneration is not started, it further states that there are no forests remaining in the Philippines by 2036. Purchasing second-hand goods when purchasing paper recycling, furniture, flooring and other wood products leads to timber sustainability. It is also the best short-term hope for climate change.

Thirdly, We have to try to consume less. The easiest way to reduce greenhouse gas emissions is simply to purchase less goods. Reducing consumption by throwing away cars or using reusable grocery bags reduces fossil fuels burned to extract, produce and transport products around the world. For example, if you buy a new car, please purchase the longest, least impacting environment. Therefore, a used car equipped with a hybrid engine provides excellent fuel economy over a long period of time while suppressing the influence on the environment of manufacturing a new car.

Climate change adversely affects the living environment, extreme weather events that threaten people's food security, reduction of agricultural yields, long-term drought causing insufficient water supply for domestic, agricultural, irrigation, etc. Cause. In order to solve it it is necessary to realize that each person's life leads to global warming.

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Current Problems in the Philippines

Momoka Ueba

In the Philippines, there are many serious problems. All problems regard of differences between rich people and poor people. Actually, I went to the Philippines to learn culture, tradition, and the current state in the summer of 2017 and I saw a lot of serious problems, for example people lived in houses that were almost broken on the river and children were collecting garbages using the handmade boat. The river looked like dark color and got muddy. In addition, when I went community which people who are middle class lived, I heard that although children could go to school, they were not able to go whole day, so it is separated morning and afternoon between senior students and junior students. However, children who are rich are able to go to school whole day. The community was bad smell and many flies flew ubiquitously and the foods at the shop or house were surrounded by flies. It looked unsanitary condition for people's health. In fact, in the philippines, 21.6% of the population lives below the national poverty line and third of the Asia in 2015. Also, in unequal education, 39 million Filipinos who are 6 to 24 years old were out-of-school children and youth seriously. The Philippines ranks in the top 10 in the world for having the most stunted children and actually, 1 of 2 Filipino children is stunted. In this thesis, I will explain about the current problems facing the Philippines, including poverty, education, and health, to determine if the negative problems can be avoided.

I

The most serious problem in the Philippines is poverty. Actually, when I went to the Philippines, I felt there were very difference between wealthy people and poor people in the Philippines. For example, when I was riding the car, I saw big malls, fast food stores, convenience stores and residential area. However, after the view, there were houses that were extremely difficult to live and there were people who nap on the end of the grand or three. In fact, in the philippines, 21.6% of the population lives below the national poverty line. It's third of the Asia. According to PSA, Filipinos poverty incidence was estimated at 26.3 percent in 2015. And also, Filipinos standard of living or the proportion of Filipino whose incomes fall below the income level, was estimated at 12.1 percent in the first semester of 2015. Decline of survival rate in Philippines is referred proportion of extreme life and poverty of Filipino. In 2015, a family of food needed at least PhP 6,3658(about 14,017 yen) on the average per month. This average indicate monthly food threshold.

The course of poverty is increasing rate of unemployment. In fact, the number of unemployment went up from 41 thousand to about 2.4 million, and number of employer fell about 40.2 million from 784 thousand in 2016. Meanwhile, the labor force participation rate decreased to 60.6 percent from 63.3 percent. The reason is overpopulation. Philippines has a high population growth rate at an average of 1.7% for the past few years. Moreover, it's higher than the world's population growth rate at an average of 1.2%.

Therefore, the solution of poverty is stopping overpopulation. Throughout the Philippines is poverty, the population is rising year by year. They need to stop raising population. In China, government regulated number of the children allow to the couple, and they succeeded to help control and reduce overpopulation gradually. In Philippines should do same assault.

II

The most important problem among children is education. These days, Philippines education system has been a relatively inclusive system of higher education. On the other hand, according to the APIS, most 10% of the estimated 39 million Filipinos who are 6 to 24 years old were out-of-school children and youth seriously. It means they can't go to school such as primary school, secondary school and college, also they don't get works. In additionally, 3.8 million out-of-school children and youth, 87.3% were 16 to 24 years old, 7.7% were 12 to 15 years old and 5.0% were 6 to 11 years old. It means the children who can't go to school is decreasing year by year, but actually, total of percentage is a serious number. And also, the rate of out-of-school children and youth, females are higher than males. The most biggest reason is marriage. In fact, there were about 36% of all reasons, but male was about 2% of all reasons.

The most common course about unequal education is marriage or family matters. Especially, the female has more serious about this course than male. Many girls do prostitutions, because they don't have enough money to live or support family, so they rely on prostitution. Moreover, in the Philippine, people are not allowed abortion by law, so they have to birth baby, if they have pregnancy. By state decree, abortion is murder, and constitution vows to protect the "life of the unborn from conception." On the other hand, by birthing baby, women get marriage even they are young. Also, high cost of education or financial concerns is one of the influence of unequal education. In 2016, there was about 20% of people have this reason. The reason, as I said in about of poverty, there are lot of people who are unemployment, so it is difficult to work in the Philippines.

The solution of unequal education is allowing abortion in law. There are many girls who don't take education. The common reason is that marriage or family matter. They have pregnancy and they marriage, so they cannot go to school to take education. In the Philippine, people are not allowed abortion by law, so girls have to birth baby, if they have pregnancy. By state decree, abortion is murder, and constitution vows to protect the "life of the unborn from conception." This state is right, but Philippine has problem that lots of children do not take education because of pregnancy. If this situation will continue, I think babies cannot take education as well and, it will not be good life for them. Government should have to change vows about abortion.

III

The other problem is health. In top 10 causes of death, proportion of stroke, Diabetes mellitus, hypertensive heart disease, chronic obstructive pulmonary disease kidney disease and asthma were increasing from 2000 to 2012. In children case, the most dangerous part of a person's life is the day they're born. The Philippines ranks 9th in the world for having the most stunted children and in fact, 1 of 2 Filipino children is stunted. And also, around 3.6 million Filipino children suffer from stunting, and 30% of these children are under 5 years old. According to the world bank, the total of Philippines health expenditure was 4.71% of GDP in 2014. These days, health expenditure is increasing, but comparing with Japan, total of Japanese health expenditure was approximately 10.23% of GDP. We have about difference of 6% between Japan and Philippines.

The course of health problem is a lack of food. A lower-middle-income country, the Philippines has a food deficit that is exacerbated by the combined effects of man-made and natural disasters that include earthquakes and typhoons. For example, if earthquakes happen, ground is collapsed and food doesn't grow and they don't have afford to manage farm again. As one of the world's most disaster-prone countries, Philippines ranked third out of 171 countries on the World Risk Index in 2015 and fourth out of 188 countries on the Global Climate Risk Index in 2016. Therefore, the weather prevents growing foods, and people are not able to consume good food enough. In the other course, undernutrition affects unhealthy, and it associates lacking of foods. Undernutrition in the Philippines remains a serious problem. The damage to health, physical growth and brain developments of children are affected by chronic undernutrition. Based on FNRI's data from 2015, the Philippines chronic malnutrition rate of children aged 0 to 2 was at 26.2%, the highest in 10 years. In 2015, Chronic malnutrition or stunting rate for children under 5 years old, was at 33.5% and it increased about 3% by 30.5% from 2013. If pregnancy does not live with good eating habit, it influences directly to baby.

The solution of health problem is cooperating with FAO. In the Philippines, there are amount of people who are undernutrition, because of lack of foods. The right meals and nourishment is a vital right for all human beings. Food is an essential element without which human beings cannot survive. Consequently, the good way to escape serious problem of health is FAO. FAO is Food and Agriculture Organization. This organization is specialized agency of the United nations that leads international efforts to defeat hunger. Actually, FAO assistants Philippines, but there are still sufferers of health issues in the Philippines, so government should reconsider about this topic and cooperate more with FAO.

IV

In conclusion, there are three courses about each current problem that are poverty, unequal education and unhealthy. These serious courses affect disadvantage of Filipino. I think all of courses are not easy to avoid, because Philippines is developing country, and they don't have enough knowledge, money and technology, so they need cooperation from other countries. I believe the government should take care of poor people and make effort to reduce serious problem. They should decide what problem is the most serious problem. Despite of having serious problems, in the Philippines, it is going up population, and they cannot keep up solve all of issues. On account of this circumstance, reducing overpopulation connects solving all problems. In unequal education, if population decrease, the children who can study in the school will increase more. Also, in health problem, if stop overpopulation, children who are saved from undernutrition will rise. There are too much people in the Philippines and they cannot solve problems clearly, but decreasing overpopulation is rising people who are focussed, they should try to solve about overpopulation first.

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Japanese Food Self-Sufficiency Nagisa Aoyama

Nowadays, Japanese declining food self-sufficiency rate in Japan decreases sharply. On the other hand, imports are on the rise. According to Japan for Sustainability, Japan's food self - sufficiency rate was 78% in 1961, but it has been declining since then. Within 10 years, it fell by 20% in 1971 to 58%. In fact, it was below 50% in 1989. Since 1998, this figure has been around 40%. In fiscal 2006, it fell to 39%, down from the 40% level. Topics frequently appear in the discussion. This figure is the lowest among industrialized countries. In Japan, about 100% of Japanese staple food rice is produced in Japan. However, the self-sufficiency rate of cereals was only 28% in 2008, far below the overall food self-sufficiency rate. This is because cereals used for livestock feed such as corn are mainly derived from imports. Furthermore, Japan is self-sufficient in the production of wheat and buckwheat necessary to make bread and noodles is only 10 to 20%. In this essay, I will describe good points and bad points of low food self-sufficiency rate, cause of low food self-sufficiency rate, and solutions.

I

First, I will introduce benefit of low food self-sufficiency rate. Low self-sufficiency is good for money. If food self-sufficiency rate is low, there are not many domestic crops in the country, so it is good for farmers because it can sell domestically produced crops at a high price. It relies on imports the country of low self-sufficiency, so even if agricultural products are poor crops due to the weather, imports are always supplemented with imports. Therefore, It is not affected by domestic climate change. Low food self-sufficiency rate means few people in agriculture, so many people get a job that is not agriculture. Agriculture has little income, so income gains by getting to other jobs. Imported foods can be obtained cheaply because they are produced with large scale agriculture.

Next, I will explain about drawbacks of low self-sufficiency rate. If the country begin to have low self-sufficiency rate, it has to rely on imports to get crops. Therefore, It is bad for consumers, because the price of food becomes unstable and it becomes easy to rise. If consumers do not buy agricultural products too much, the economy will also get worse. Securing food is easy to be affected by the weather and food problems of the world by depend too much on imports, so it will lack food. In order to import food, various transportation facilities must be used. Therefore, it is bad for environmental aspects, because it generates a lot of CO₂, which leads to global warming. The rise in population of developing countries and the energy conversion of grains causes food competition. Therefore, it is not always possible to import stable food.

II

The first cause is increasing imported foods. Japanese diet is changing from Washoku to Western food. We were feeding a diet eating a lot of fish and vegetables, mainly on rice which is staple food. However, as society evolved, eating Western food in the diet rapidly advanced. We have eaten a lot of meat, dairy products, livestock products such as eggs and fats and oils. Because raw materials for livestock feeds and oils and fats can not be made in Japan in large quantities, we must rely on imports. Imported foods is cheaper than Japanese ones, and they are sold in large quantities, so many people buy imported foods. In addition, they are used in many restaurants to keep price down. Therefore, many people eat even if they do not buy imported foods. The second cause is declining agriculture. The declining birthrate and aging population are progressing, and production is steadily decreasing in agriculture where elderly people make up the majority. Also, young people go to city, so there are not many young people in rural areas, and there are not many young people doing agriculture. In addition, many young people eat western food better than Washoku, and demand for domestic agricultural products is decreasing. Actually, the amount of rice to eat which can be made a lot in Japan is reduced. Therefore, agricultural land area is decreasing, too. The third cause is environment. In Japan, 70% is a mountainous area, and it is more special than other countries. Therefore, even if you change all the flat land to agricultural land, it is not enough. In addition, typhoons are easy to come in Japan, and each time a typhoon comes, it affects agricultural crops adversely. Since Japan is an island country, volcanic eruptions and earthquakes are easy to occur. Also, global warming recently has been progressing more and more, leading to abnormal weather, desertification, and drought.

III

First, by buying domestic crops by consumers, the decline of Japan's food self-sufficiency rate is softened. We should eat more Japanese food such as rice. Also, it is also important to not only eat rice as a staple food but also restore past sweets using rice and rice flour. By doing so, it is possible to suppress imports and increase self-sufficiency of domestic crops. in addition, by eating Japanese foods, nutritional balance will be adjusted and it will also be effective in preventing obesity. Food businesses communicate domestic foods and foods to consumers easily and

promote consumption of domestic products by selling. Second, reducing food waste helps the decline of Japan's food self-sufficiency rate is softened. Reducing unnecessary consumption of food will help reduce the need for food imports. Also, disposing of food has an adverse effect on the environment, so reducing food waste problems can also improve the environment and create an environment that makes agriculture easier. Reducing food waste is to be done by every citizen of the consumer. So you can reduce it just by being careful about everyone. here are also crops that can be thrown away due to reasons such as poor shape in domestic crops such as supermarkets. Even if the shape is bad, if you sell it cheaply, for example, the self-sufficiency rate will rise a little. Finally, activating agriculture helps the decline of Japan's food self-sufficiency rate is softened. Japan is a country of a special mountainous country and the land which can be used for agriculture is not much compared with other developed countries. However we are able to make effective use of limited agricultural resources and provide safe and high quality agricultural products. If the demand of domestic agricultural products recovers, vibrancy returns to rural areas, and agricultural players increase. As agriculture has many elderly people, young people doing agriculture will increase efficiency and will be able to produce more crops.

IV

In conclusion, relying on imports does not necessarily ensure that you can get food stably, and it also adversely affects the environment. There are possible solutions to the problem of Japan's food self-sufficiency rate. Declining food self-sufficiency rate in Japan is not a problem for only Japan. As a result, many developing countries are affected. Developed countries import a large amount of food so food that can be imported by developing countries is limited. Therefore, starvation also progresses. Therefore, this problem must be solved also in order to eliminate world starvation.

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Water Should be Healthy and Global Natsuki Tsujimoto

There is difference in water hardness even in a same world. According to the World Health Organization, water containing calcium carbonate at concentrations below 60 mg(milligram)/l is generally considered as soft, from 60 to 120 mg/l is moderately hard, from 120 to 180 mg/l is hard and more than 180 mg/l is very hard. Both hard water and soft water have benefit and disadvantages. In the Japanese ward, "itcho ittan" is perfect word to explain these two. In addition, each country were developed by each kind of water. For example, products and cuisine. Water with high mineral content is hard water, and water with low mineral is distinguished from soft water. The land of Japan is steep in the mountains and the plains are not wide, so the flow of water from highlands to lowlands is fast. So the time to absorb minerals from stratum is short and also there are not many minerals originally because of volcanic zone. So water in Japan is soft water. However, Europe has gentle terrain and there is not much difference in the height of the land. Water through slowly over time in the stratum so it tends to be hard water containing a lot of minerals. In this thesis, I will explain about difference between soft water and hard water, advantages and disadvantages for health, food and other things, and effects to determine which is better.

I

First of all, I will tell you about what is difference between soft water and hard water. As I explained before, there is standard of water hardness. Mainly the water is including Calcium ion and Magnesium ion. "The hardness" means the numerical value that express quantity of Calcium and Magnesium melting in 1 liter of water. It is separated by difference in quantity of Calcium and Magnesium. In the case of Japan, less than 100 mg is called soft water and more than 100 mg is called hard water. The hardness of water is difference between countries and areas even if it is a same world. First, normally the water in Japan is soft water. In contrast, normally the water of Europe is hard water. Furthermore, water in China is relatively high and north America is scattered. The visual is same but smell and texture are different. Generally, soft water is lighter than hard water because hard water has unique thickening when you drink and more heavier than soft water.

Secondly, I will tell you about advantages and disadvantages of soft water and hard water. The advantage of hard water is a good source to get Calcium and Magnesium into the body. Calcium and Magnesium are very important for health. Normally, they helps to keep muscle, nerve function and strong bone. Especially Magnesium. The bone can be the storehouse for Calcium. But people can't get Magnesium very much from the storehouse so hard water is the one of good way to get Magnesium otherwise people may be Magnesium deficiency. Hard water also reduces the solubility of toxic metal ion. And the advantage of soft water is not hard on the skin, clothes and dishes. If you wash hair or body by hard water, skin may be stiff and hair may be dry. In contrast, both hard water and soft water have disadvantage. The hard water's disadvantage is to make cloths rough and worn out during washing. And also it make difficult to take off dirt from the skin. Build up of water scale and electric erosion are also caused by hard water. The soft water's disadvantage is Mineral can dissolve constipation and swelling but we can't supply Mineral from water so we have to take in from other thing.

Thirdly, I will explain about effects of soft water and hard water. In the case of hard water, a sparkle is bad so it can't wash enough. Mineral such as Calcium and Magnesium which is including in hard water makes chemical reaction with ingredient of the detergent. In the case of meal, soft water is suitable for Japanese food, especially Washoku. It is hard to begin to melt for Glutamic acid and Inosinic acid which are taste ingredient. However, hard water is suitable to stew western meat. Calcium is tied to an ingredient hardening meat. In addition, as the hardness becomes higher, the green tea's taste is hard to be extracted. As the hardness becomes lower, the green tea's smell is hard to be extracted. So soft water is good for Japanese tea because Japanese tea is enjoyed taste, hard water is good for Chinese tea because Chinese is enjoyed smell.

II

First of all, I will tell you about advantages of hard water and soft water. In hard water, it has a lot of magnesium and calcium so it is good source to get them into the body. Normally, they help to keep muscle, nerve function and strong bone. The bone can be the storehouse of calcium. But magnesium is not stored the bone. If people don't get magnesium. they may be magnesium deficiency. The main symptom of magnesium deficiency is becoming lifestyle disease. For example, osteoporosis, heart disease and diabetes. In addition, basal metabolic rate and fat-burning will be up by minerals so metabolism will be promoted. And calcium restrains absorption of the fat. Furthermore, magnesium improve constipation because magnesium stimulates stomach and intestines and make them active. In contrast, soft water advantages are not hard on skin, cloth and dishes. If hair and body are washed by hard water, the skin may be stiff and dry. Moreover, soft water absorbs into body so it's good for when doing exercise. Also

unlike hard water, there are only few burdens to the stomach and intestines and the fair skin effect is affected too because of absorption to a body and untie a keratin. Additionally, when you use soft water for cooking, the flavors such as umami flavor and smell will increase.

Next, I will introduce about disadvantages of hard water and soft water. It will makes clothe rough and worn out during washing. It also make difficult to take off dirt from the skin. Build up of water scale and electric are also caused by hard water. On health side, it burden on stomach and intestines. Especially, it is not good for people who is not constipation, baby whose organ doesn't grow up yet and children who is in period of growth. So if they drink hard water, there are possibility to become poor physical condition such as the diarrhea. For the people who doesn't get used to drink hard water, it's hard to drink because taste is very tough. Also it has racy flavor from Magnesium, so it's not good for some kind of cook. On the other hand, soft water disadvantages are people can't get a lot of Mineral from water. The people can't make mineral in the body so water is good source for getting Mineral it doesn't have so much Minerals. The main function of mineral is constituting the organization of the body such as bones and fixing the condition of body. If mineral become lack, the physical condition and mental condition will be lack too. In addition, soft water has Sodium. Generally, Sodium is in salt so getting soft water too much is not good for health.

III

First of all, I will tell you about effects on our health and bodies. In hard water, it has a lot of Magnesium and Calcium. Magnesium is able to make entreal stool soft and Calcium is able to make becoming more active enteral environment. So it can expect constipation cancellation. In addition, hard water is better when doing sports or exercise. Because some troubles which occur at that time such as having a foot cramped can reduce by taking moderate Calcium and Magnesium. However, if people who doesn't used to drink hard water like Japanese people drink it in large quality suddenly, there is a possibility to get stomach aches. But hard water is good for health for sure so divide drinking water into several times or change from soft water to hard water gradually are better for body. By the way, there is a bad effect for body. If wash hair by hard water, it will be stuffy touch. That is caused by a mineral reaches the protein of the hair. Also the mineral which is including in hard water and soap cause a chemical reaction, the soap refuse may be left. From that, it may cause bad influences for hair and scalp.

Secondly, I'm going to explain about some effects for foods focus on Japan. Some people think that hard water is higher in nutritive value because it has lots of minerals, but in the case of Japan, there are many Japanese culture especially Japanese foods which were born from soft water. Generally, soft water matches Japanese food. To take the soup stock with dried bonito or kelp, and possible to cook plump rice with the sweetness, are technique of soft water. If cook Japanese rice with hard water that include much minerals, protein hardens by action of Calcium and umami flavor such as glutamic acid and inosinic acid becomes hard to begin to melt into meals. Even in same Japan, Kanto area where east side of Japan and Kansai area where west side of Japan have different hardness of water. Generally, Kanto area has higher hardness than Kansai area. That difference makes influence to dashi. Around Kansai area, hardness of water is softer so it can draw Umami flavor from kelp. That's why dashi which made from kelp developed. However around Kanto area, hardness is bit higher so it is not easy to melt Umami flavor from kelp therefore dashi which is made from dried bonito developed. In Kanto area, they also use fish such as dried bonito so dark soy sauce came to be employed for extinguish the fish smell.

Finally, I will introduce about some effects from water for other things except health and foods. Health of the blood vessel leads to longevity. For that, moderate calcium is important. So drinking water and get mineral from it is good to get it regularly. However, Japan is longevity country but almost all areas are using soft water. From that point, there are more important cause such as medical development and intake of the fat to live longer. Generally, mineral water is not good for dogs as well. The one reason for that is there are lots of magnesium more than necessary. So if dogs get too much minerals, they might get urinary calculus but there are more dogs which have urinary calculus in Japan more than Europe and America. The other reason is there is huge site so they can exercise enough and can make pee anytime they want. Even so, there is a gene trouble so they don't have to get hard water with lots of mineral. For plants, excessive mineral is not good. In the cause of Japan, tap water which cleared a severe quality of the water standard so it's no problem. Mineral is necessary to growing up but too much is not for plants. Also mineral is bad especially for the plant which does not like chlorine. Even if people give hard water to plants, growth is not promoted. From these reasons, people don't have to give hard water and soft water such as tap water in Japan is enough. But still if plants need mineral, they can get from fertilizer.

IV

In conclusion, there are difference between soft water and hard water and each water have benefit and disadvantage. The disadvantages of soft water is the fewest, and the benefits of soft water is the most. For result, soft water is best for many situation. However, soft water or hard water is more better for people, animals and plants. There

are many different cultures and products which are match to each soft water and hard water in each areas and countries. However hard water is not good for the animals and plants which were born in Japan and people who is not used to drink hard water. Definitely, hard water has some good influences but soft water has more good influences than hard water.

I thought that it's impossible to drink tap water in where has hard water. But I could drink it. But making tea was bit difficult because it took time to be extracted. In addition, when I take shower, my body becomes dry. I think all of those my experiences are because of difference of water hardness. I think if companies correspond to difference of water hardness, water might be more useful in anytime and global. Recently globalization is advancing and food becoming global so water should be global too. Because, in the world, the meal in accord with water is cooked. If water becomes global, it might the width of the meal spreads. In order to tell each countries' culture around the world correctly, water should be global. Water have lots of effects and it is very good depending on usage.

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Ways to Improve Vietnam's Farming Natsuko Shima

Vietnam's economy is developing and has influence on all over the world, especially about agriculture. According to the ricepedia Vietnam is one of world's richest agricultural regions and is the second-largest exporter worldwide and the world's seventh-largest consumer of rice. The amount of production of coffee beans are the second in the world .However it is also known as climate change as its problems. According to Ministry of Natural Resources and Environment, the average temperature has increased about 0.5°C during the last 50 years. The rainfall in dry & wet seasons and annual rainfall increased strongest. Vietnam's major threats is said that its Floods, Typhoons, Landslides, Earthquakes, Drought' in spite of is known as a famous farming place. According to Germanwatch, Vietnam's extreme droughts continued well into the year 2016 and were recorded as the worst droughts in the last 100 years. Several natural disasters in 2016 caused over 160 lives to be lost and destroyed 370 000 homes, and also the losses caused by Aere amounted to around US\$ 112 million, because of these problems Vietnam's global risk index is 5th out of 178 countries which is not good so we need to think more about farming in Vietnam to do farming efficiently.

I

Firstly, I will explain one of the famous agricultural products in Vietnam, which is rice production. Actually according to rice pedia, Rice is the first amount of agricultural production in Vietnam. Furthermore according to the global note, Vietnam is one of world's richest agricultural regions and is the second-largest (after Thailand) exporter worldwide and the world's seventh-largest consumer of rice, as everyone knows rice is also important food in Japan. In addition out of Vietnam's 9 million ha of arable land, 4.2 million ha (47%) is planted in rice. In detail Paddy rice production is about 44,974.21, and Milled production is about 29,374.20. Rice occupies around 85 percent of the total area under rice, corn, sweet potato and cassava. According to the MARD Vietnam in 2010 main rice production is planted from May to August and harvested from September to December.

Secondly, I will tell you about Mushroom Farming. According Sustainable Management of Natural Resources in Central Vietnam, Mushroom production is considered an economically highly effective sub-sector, involving participation of many farmers in Vietnam since 1990. There are two types of mushroom farming which is indoor and outdoor. According to my field trip Indoor mushroom farming is known as a good way for the environment because Indoor mushroom farming is small scale farming and is a good way for farmers to stabilize their income. However according to the Vietnam News "The country's total output of both edible and medicinal mushrooms only reaches 250,000 tonnes, with an export turnover of US\$60 million per year. Meanwhile, with the abundance of mushroom growing materials, including straws, logs and enriched sawdust, which can reach 40 million tonnes per year, Viet Nam has a great potential for the development of the mushroom industry." which means there are some possibilities to have efficient mushroom farming. According to the TED blog, usually after each crop harvest, farmers did not collect rice straw but burned them on the bank of the river or discharged them into rivers. As a result, rice straws become organic waste, causing environmental pollution.

Third, I will explain about the coffee beans in Vietnam. Coffee is Vietnam's key export, generating an income of more than \$1.5bn. Furthermore, according to the guardian 1,406,469t of coffee beans are produced in Vietnam, also milk coffee is famous for its Vietnam's, In addition according to the globe note, In total, the coffee sector represents 3% of national GDP, providing a livelihood for around 2.6 million people. According to the coffee secrets of Vietnam, The name of coffee beans which is really famous in Vietnam is Robusta coffee which is widely used to make instant coffee. Vietnam has become an important source of Robusta coffee for many large coffee roasters, due to its vast availability and reasonable value. Strauss purchases more than 350,000 bags annually from Vietnam. It also said that The majority of Vietnamese coffee plantation is small and medium sized from less than 1 to 50 hectares. There is less than 5% of coffee plantation are larges scaled (more than 500 hectares).

II

First, there is a lot of rice straw which affects the environment. According to the Vietnam News, the large amount of straw burned after harvests every year was a waste of materials and also causes pollution. Agricultural entrepreneur, Trang Tran a native Vietnam, says farmers traditionally burn the straw and husks that remain after the rice harvest. This practice happens at least twice a year for two months at a time, releasing noxious smoke and greenhouse gases into the atmosphere. According to the TED, Rice straw burning is something that happens every harvest season. And it's considered the most convenient way of getting rid of waste. Straw is perceived as having no value farmers just want to get it out of the way as soon as possible in order to prepare for the next crop. Actually, in

Vietnam about 20 to 50 million tons of rice straw are burned, releasing greenhouse gases into the atmosphere. Obviously this contributes to climate change.

Secondly, as I said before, Vietnam is affected by climate change. Hanoi and North Vietnam have a distinct winter and summer season. The cool, but mostly dry winters, last from November to April with the average temperatures between 17-22°C. The coldest months being January - March. Summer lasts from May to October when it is hot and humid and the region experiences its highest rainfall. For example, there are two types of mushroom farming in Vietnam. Outdoor mushroom farming is easy to be affected by climate because it is outside. So nowadays people who are farming mushroom make other way to be protected by heavy Vietnam's weather. Actually, Scientists agree on the necessity of developing mushroom cultivation in Vietnam. It not only helps produce clean food, create jobs, reduce poverty but also helps reduce environmental pollution.

Finally, because of temperature and weathers the disasters is happening in Vietnam. In Vietnam, there are many disasters caused by floods and typhoons. Especially in Vietnam there are a lot of disasters from May to January. A typical cause is floods caused by typhoons. And sometimes earthquakes strike, although not very often. They do serious damage. Hundreds of people die each year and they suffer millions of dollars of damage. Rice production is greatly affected by natural disasters such as floods and typhoons. As a result, the farmer's income fluctuates from year to year.

III

Firstly, I will suggest to use the ricestawr for mushroom's materials more. There is mushroom farming which is famous in Vietnam. I actually saw it and also there were tons of rice straw which didn't use when I went to Vietnam, what they were doing is using the wasted rice straw for mushroom materials, because they have a lot of . According to Vietnam News the abundance of mushroom growing materials, including straws, logs and enriched sawdust, which can reach 40 million tonnes per year, Viet Nam has a great potential for the development of the mushroom industry, Furthermore Mr.Linh who is director of the Agricultural Genetics Institute Biotechnology Centre said that even only 10 – 15 percent of the available mushroom growing materials were used up, about 1 million tonnes of mushrooms still would be produced with hundreds of thousands of tonnes of organic fertilisers, which means people can earn more money with using the rice straw which was wasted, In addition to it people can save the environment from the greenhouse gases.

Next I will suggest the way to do the farming inside, kind of plastic greenhouse, as I said before Vietnam is easy to be affected by weather like typhoon or something, that's why mushrooms and rices are affected and damaged. Actually in Vietnam there are two types of farming which is doing inside and outside when I went to Vietnam and visited FUAF, university students who are studying about agriculture told me there is outside mushroom farming but they said it is hard to do it. They also recommended to do indoor mushroom farming. According to GFDRR Changes in paddy rice production in 2050 is going to be about negative 14.5 because of dry and wet but we can save it. We can control the humidity by doing inside.

Finally I will suggest to build more research centres of production processing and preservation to give them more opportunity to learn how to cultivate . Because in Vietnam those centres which teach farmers to how to do indoor farming are not enough. Actually according to Vietnam News Mr. Linh said "However, a lack of research centres with poor technologies for mushroom processing and preservation cause a hindrance to growth". In addition VNexpress said there is a person who learned about mushroom, and after four years of working as a mechanic in Canada, Tang Thanh Duc quit his job and turned to growing white mushrooms. Then he built a successful business and eventually had more than 100 hectares under cultivation. He also said there were not so many support of modern technology. But also it costs a lot to built such a technical centre so people in Vietnam need more money and person who can teach us like them. At present, his family turns out 10 tonnes of mushrooms per month, but should customer demand increase he is capable of producing 15 tonnes which is really efficient.

IV

In conclusion Vietnam's agricultural production is really important in the world and It can recognize that how Vietnam's farming are huge. In spite of that Vietnam is suffered from weather and temperature, has many disasters like floods and typhoons. It has become more difficult to do farming efficiently. Actually there are some ways which are already tried but people in Vietnamese don't really know about it. So what they need is not just helping them by acting but also make policies about finance. We need to tell everyone about Vietnam's farming and they can get help by some government or something.

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Solutions for African Children to Go to School

Haruka Yuasa

According to the UNICEF, one of 11 children do not go to elementary school in the world. Especially in Sub-Saharan Africa, 21% of children do not go to school, it is over half of all children who do not go to children in the world. Also, countries where have the highest rate of children who do not go to elementary school in the world are South Sudan (69%), Liberia (62%), Sudan (45%), Equatorial Guinea (43%). Djibouti (43%). All these countries are located in Africa. A lot of national organization and NGOs are trying to resolve education problem in Africa by providing foods. A lot of children are still not able to go to school. Some of them do not even have opportunities to receive education. In this essay, I will explain three causes of African children cannot go to school, including child labour (economical reasons), gender discrimination (cultural reason), and lack of school (social reason), to identify the issue of this problem. I am also going to talk about 2 relations between food and education to know why many organizations provide foods to resolve education problem, and how food and education are related. Furthermore, I will suggest some solutions to make more opportunities that children can go to school. Education is basic right for human, but there are still a lot of children who need education.

I

The first reason is child labour. According to the International Labour Organization, Africa has the largest number of child labour. 59 million children who are between 5 years old to 17 years old work with hazards like stone quarries, farms, and mines. In these places, more than one in 5 African children are employed as workers. The main reason of this problem is poverty. Of course without money, they cannot pay school fee. But first of all, they work to alive the next day. So they work from when they are children to get money for themselves and their family. Globally, the number of child labour has decreased since 2000, from 246 million to 168 million. However, Sub-Saharan Africa is still the place where have the highest incidence of child labour and over one of 5 children are workers. According to the ranking of GLOBAL FINANCE, the poorest country in the world is Central African Republic in 2016. Also the ranking includes many African countries. That is why Africa has many child labour. It is difficult to go to school for them because they do not have much money.

Secondly, in the world, there are still cultural gender discrimination and custom that separates roles of men and women. The thought that girls get marry early and do something in the house or girls do not need education because they do housework is remaining. Early marriage and pregnancy is one big problem for girls. According to the PLAN INTERNATIONAL, when girls are forced to marry young, they are often pulled out of school at a very critical age in their development. Primary to secondary education is key point for children, but it is same timers that many girls leave school because of marriage or pregnancy. Just because they are girls, many children cannot receive education. As I wrote before, poverty is the main issue of children cannot go school. It means, if girls have their siblings, boys would be given more priority than girls. Also, there is case that school has problem for girls too. For example, the school do not have restroom for girls. And there are risks that girls are discriminated or get sexual abuse in the school. Actually, the schools that have female teachers are not a lot. So there are not enough school where have good environments for girls. Because of these reasons, it is more difficult to go to school for girls.

Lastly, many children cannot go to school because there is no school in the place where they are living. In some cases, the country or the area do not have enough money to build schools. But in other cases, the schools are destroyed by war. African countries have a lot of conflict, and there are not enough school in those countries. If there is no school near the children's house, sometimes they have to walk along dangerous way. So their parents hope them to stay and work in the house.

II

First solution is training teachers and increase the amount of women teachers. This is a solution to lack of school. Now, a lot of organization such as UNICEF or NPOs and individuals are trying to build schools. As a result, the amount of schools is actual increasing, according to the JICA, they built over 2600 schools in 22 African countries. Other international organizations and individuals have built a lot of schools as well. However, school do not work as educational institutions without excellent teachers. And in Sub-Sahara Africa, the number of school is still lowest in Africa. According to the politicsweb, pupil teacher ratio is 30.4:1 in South Africa in 2012. Some people who do not have a teacher's license teach classes as volunteer, and it is not uncommon as well. Lack of teachers is a serious problem. If number of schools increases, children cannot receive education without teachers. In addition, percent of women teachers are 33 percent in Comoros and 34 percent in Mozambique in 2007. In 7 out 13 countries around Africa, the percent of women teachers are under 50 percent. As you can see, the number of female teachers is overwhelmingly small. We need to make an environment where more girls can feel easy to come school

by increasing female teachers and setting up toilets for girls. In Africa, educational opportunities for girls are less than for boys, however there are data that reference girls' education has positive effect on society. To increase the number of teachers, developed countries have to cooperate. As JICA dispatch JOCV, or UNICEF dispatch local staff, more countries which has high quality education in their own country should send human who can train local teachers. In doing so, the burden on African countries is light. Local teachers or volunteers who teach children without licence can get skills to provide students more high-quality education. After local teachers got knowledge to run classes and school, they can be a teacher of next new teacher. Making the cycle in local and supporting to become independent are important. And it is also important to deepen cooperation between teachers' universities and new schools. In doing so, new graduates can get job and schools can provide more high-quality education to students. It is possible to have student teaching too. It also helps to persuade parents who do not want their children to go to school.

Second solution that to child labour problem is providing school meals. Table For Two (TFT) has a concept that people in developed countries and children in developing countries share meals. TFT has TFT healthy menu that are providing at company cafeterias or stores. If people buy the TFT healthy meal, 20 yen from the price will be donated, and people can give one school meal to children who are suffering from hunger. WFP has 45 years of experience in school feeding. School meal is one of food aid that WFP is doing in schools, children receive ration of breakfast or lunch (sometimes both of them) at school. This school meal is cooked in the school, or is brought from lunch preparation kitchen. Some schools provide hot meals and others provide biscuits or snacks that have high nutrients. As another style of food aid in school, there is takeout. Children can takeout meals for all of their family members if they go to school property. They have to enrol school, and attend enough class to receive the takeout meals. This aid can supplement household expenses' loss caused by the fact that children go to school. Also in some cases, school provides both of takeout meals and school meals to children and their family who are in particularly weak position like child who has lost parents. WFP is promoting local procurement of food and local food production and consumption as much as possible. It leads to develop of local community and support for small farmers. Not one-way help, it is needed to solve the problem together.

Japanese Comedy and Three
Haruto Kondo

Japanese comedy stands on old history. So There are a lot of rules which shows how to make laugh, for example “Nori Tsukkomi (ノリツッコミ)”, “No funny but funny style (スベリ芸)” and so on. “Three step finish (三段オチ)” is one of the rule to make laugh too. However, this rule has a lot of mystery. Why must it be 3? Why can the rule make laugh? These mystery besieged a few intelligence Japanese comedian. In this essay to show, I will approach write the mystery of three steps finish stepwisely.

“Three steps finish (三段オチ)” is one of the major laugh rule in Japanese comedy. In detail, Firstly there are the pattern(X) two times. Then, there is an another pattern(Y) which is same as X or different from X but both are related to X. For example from comedy dialogue ”Shinsuke Ryusuke (紳助竜介)” from THE MANZAI in 1980, (The movie is from DVD (紳竜の研究)).

(They are riding a bike) Shinsuke(S) Ryusuke(R)

R ”Watch out! There is a dog in front of us! (ああ、前から犬や犬!)” BRRRRRRR...Bam!

R “You ran over the dog!(おい! 犬轢いたで!)”.

S “No problem, because we are motorcycle gang! (かまへんねん、暴走族やから)”

R ”Watch out! There is a cat in front of us! Watch out! (前から猫や猫!)” BRRRRRRR...Bam!

R “You ran over the cat!(おい! 猫轢いたで!)”.

S “No problem, because we are motorcycle gang! (かまへんねん、暴走族やから)”

R ”Watch out! There is a child in front of us! (子どもおるで子ども!)” BRRRRRRR...Bam!

R “You ran over the child!(おい! 子ども轢いたで!)”.

R “It’s no problem isn’t it? Because we are motorcycle gang! (まあかまへんなあ、暴走族やから)”

S “You are terrible! (ええわけないやろアホ!)”

R “Say what? (はあ!?)”

Yoshichi Shimada (島田洋七) who is an able and talented comedian in Japan said “I don’t know why it is, but the rule which can make laugh must be three steps. It is not interesting if it is two steps.” in same DVD. In actual, it is not interesting if it is two steps, and it is not interesting too if it is four steps. Why must it be three steps? By the way, one of the peculiarity of Steve Jobs’s presentation is that Jobs always says three points for explaining things. For example, When he announced "iPhone" in 2007, Jobs said it is the third innovative device following Mac, iPod. In addition to that, he said "to reinvent the phone" as one device incorporating three of the iPod, phone, Internet communication device. Then other remarkable points of 3 are the title of things. For instance, “The three little pig”, “The Three Musketeers” and “The sleeping man (“三(it means three in Japan)”年寝太郎)”. I wonder that “3 is a magic number”. Now let's return to the main subject, next paragraph, I will try to describe the mystery of “Three steps finish” to analyze the rules which were created by Shijaku Katsura who is one of the greatest Rakugo comedian.

Shijaku Katsura (桂枝雀) was a genius of Rakugo and a scholar of Rakugo. So he found a lot of rules of why human laughs. “Tension relaxation theory (緊張の緩和理論)” is the one of the greatest discoveries in Japanese comedy history. Shijaku said that all of the rule why human laughs are able to be explained by the theory, and his saying is already proved true by history and the comedians after Shijaku’s activity.

It is very difficult for me to Explain this theory in English, but I will. Firstly, we must acknowledge that all of laugh is made by the phenomenon which is that people’s nervousness goes to calm down. It means that if the emotion or situation change from stiff to relax, human feel lucky and good. So, laugh is the sign of this process. Conversely, it can be said that if people don’t have nervousness, people mustn’t laugh. For example, the situation that noblewoman tumbles flamboyantly have “noblewoman” as nervousness part, and “tumbles flamboyantly” as relax part. So the situation can make people laugh. However the situation that high school girl tumbles flamboyantly can’t make people laugh. Because the situation doesn’t have any nervousness part. In addition to this Shijaku said that too much nervous or too much relax can’t make laugh too, because they makes other emotion such as trepidation or angry. However, Shijaku said that Tension relaxation theory is materialized by primitive human’s instinct. There are totally three stages. Firstly, there is Tension relaxation theory on the top of the stages. Secondly, there is “Happy stage” under Tension relaxation theory stage. For example, the situation that primitive men defeat mammoth, and the situation that man could buy his own house. Finally, Shijaku said that there is nirvana the nadir of the stages. This stage can be said in other word “Big relaxation”. This stage doesn’t have any nervous, so there are no laughing on the stage.

By the way, it is very difficult to explain why three steps finish is interesting to use only this theory. I need to make more detail to it. So, next paragraph, I will detail about this theory to solve three steps theory.

The history of fighting between Japanese comedian and laugh must be “Finding nervousness part and relax part”. And there is a champion who is generally admitted to be in the history. His name is “Hitoshi Matsumoto (松本人志)”. He names his own comedy style “Laughter of ideas”. He said “I always think and find the idea which even intelligent people couldn’t bethink for normal question.”. Actually, his idea is always crazy, but it always make people laugh.

Shinsuke Shimada (島田紳助) who is legendary comedian in Japan (Practically, Hitoshi Matsumoto acknowledge that he imitated Shinsuke Shimada when he was young.), explaining about comedian will be one of the big hint to solve all of the mysteries in this thesis. He said “I believe that almost of all comedian might be a straightforward common-sense man. Because we (comedian) need to know common-sense for making laugh, because if the part which we will break is already insane, we can’t break anything or if we could break it, but it must not be interesting, because people must not be able to understand such a crazy thing. So, comedian doesn’t do any illegal for example inject a narcotic...”. Hitoshi Matsumoto agree with that intensely. Moreover he said “However, we (comedian) are nuts in other side such as love and point of view.”.

The hint can be linked the intentions which can lead us to solution of mystery. Firstly, the reason why “Laughter of ideas” can make people laugh is that “Hitoshi Matsumoto is straightforward common-sense man”. He is straightforward common-sense man. So he can break common-sense, and make people laugh. Therefore, it can be said that if we want to make people laugh, we need to know common-sense. The point is common-sense. How is it related to Tension relaxation theory?

For solving it, I focused on nirvana in his theory (This stage doesn’t have any nervous, so there are no laughing on the stage.). I think that there is common point between nirvana and common-sense. In addition to this, I found the point which I could guess that “Nirvana is common-sense”. Firstly the common point is that both don’t have any laughing point. Because both doesn’t have any nervous. Who laughs seeing common-sense? Then, we need to focus above stage “Happy stage”. Remember the example of it. “The situation that primitive men defeat mammoth, and the situation that man could buy his own house.”. Both examples were from shijaku saying. Then we need to consider the example “The situation that man could buy his own house.”. Fundamentally, why the man could be happy to buy his own house. The reason of happening the question, the word or situation “Buying” and “His own house” do not radically mean “happy”. Why was the man feel happy to do that? In my opinion, because “Buying” and “His own house” are acknowledged as “Happy” in common-sense. So, “The situation that man could buy his own house.” was happy. So, progressively it can be said that “common-sense presides over happy”. In addition to this, if “Happy stage” is primitive stage for Tension relaxation theory, it can be said that laugh is presided over by common-sense.

“Laugh is presided over by common-sense”. Eventually, I can start to solve Three steps finish. In solving it, I will use two evidences “Tension relaxation theory” and “Laugh is presided over by common-sense”. And I will use the example of Three steps finish which I write before paragraph as a medium for solving three steps mystery. At first, the rule starts to make “common-sense” in the story.

R “Watch out! There is a dog in front of us! (ああ、前から犬や犬!)” BRRRRRRR...Bam!

R “You ran over the dog!(おい! 犬轢いたで!)”.

S “No problem, because we are motorcycle gang! (かまへんねん、暴走族やから)”

R “Watch out! There is a cat in front of us! Watch out! (前から猫や猫!)” BRRRRRRR...Bam!

R “You ran over the cat!(おい! 猫轢いたで!)”.

S “No problem, because we are motorcycle gang! (かまへんねん、暴走族やから)”

The two steps will make us the common-sense which is that “Running over something is no problem for motorcycle gang”. It will be common-sense for watcher before step three. In addition to this, we must acknowledge that Shinsuke teaching and Ryusuke understanding become nervousness part for the story.

Then, it appear the relax part.

R “Watch out! There is a child in front of us! (子どもおるで子ども!)” BRRRRRRR...Bam!

R “You ran over the child!(おい! 子ども轢いたで!)”.

R “It’s no problem isn’t it? Because we are motorcycle gang! (まあかまへんなあ、暴走族やから)”

S “You are terrible! (ええわけないやろアホ!)”

R “Say what? (はあ!?)”

There is the fact which is worthy of note in the story. It is that “Ryusuke becomes the spokesman who talks our common-sense, Running over something is no problem for motorcycle gang”. After Ryusuke talking our common-sense, it breaks by Shinsuke talking “You are terrible! (ええわけないやろアホ!)”. And “Say what? (はあ!?)”

makes relax part in the story. In this instant, Ryusuke will become a humorously person in the story, and people will be able to laugh, because Tension relaxation theory was executed in the story.

In conclusion, we could explain why three steps finish is interesting to use Tension relaxation theory and common-sense. In addition to this, I guess that we can solve the mystery of 3 in the title to use them. However, we still have mystery. Why must it be 3? It means that why people are enough to understand what is common-sense in two times. I think that the speed of understanding in human brain may cause the reason why it is 3. 2 is not enough for us to understand common-sense, but 4 is too much to understand it. So we will be embarrass or angry by them. However, then, it will happen a new mystery, why the speed of understanding in human brain is the speed. It must be cat and mouse game. So, I stop thinking more about it. However, I think the way which I wrote, why three steps finish is interesting. And sounds like we can use the process in various situations. It's worth to remember.

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Disparity is the Root of a Vicious Circle Haruto Nishiura

In many developing countries, there is still a low-level standard of living. Governments don't have enough resources to invest to aid for these people. Especially, the least developed countries which are the landlocked developing countries and the small island developing states continue to make poverty reduction. However, inequality still persists and large disparities remain in access to many aspects services and other resources. In addition, income inequality between countries have been reduced slightly, but inequality within countries has increased. I think microfinance might be one of the solutions to reduce disparity. Microfinance was established as an organization which helps the poor people with a loan with small interest. This structure allows these people to return the money easier than an elderly bank. I think this is a good structure for poor people. However, I thought there could be some issue to run this business. There is any business that has no drawbacks. Then, I will explain the issue which grouped by the big group as the country or small group as a rural area. Because of this, I think there is a little bit of conflict between big scale and small scale. The government has control with any function of finance stuff. On a big scale, the government has a direct impact on a country. However, in a small village such as a village in the mountain or settlement in the rural area, the leader upper class of people have the initiative to organize the finance. In this case, as I mentioned that the money or loan cannot be distributed each person properly. I found some issue in here. As I mentioned, microfinance has a various advantage for individuals and for a country. However, I focused on the drawbacks of microfinance, because these disadvantages will be a big issue in the developing country. Also, if these problems become serious, the disparity might be bigger than a present. I understand it will be difficult to solve all the problem on that project. However, we can 'mitigate' them slightly. In this essay, I will talk about the future plan and mitigation which help to reduce the effects of these issues. Also, I am going to explain mitigation categorized as country mitigation and by regions.

I

First of all, I will talk about the background of microfinance. According to the World Bank, more than 16 million people are served by some 7000 microfinance institutions all over the world. CGAP experts average that about 500 million families benefit from these small loans making new business possible. In a gathering at a Microcredit summit in Washington DC, the goal reached 100 million of the world poor people buy credits from the world leaders and major financial institutions. In 2005, United nation was required as the International Year of Microcredit by the economic and social council of the United Nations in a call for the financial and building sector to “aid” the strong entrepreneurial spirit of the poor people around the world. Next, I will talk about the structure of microfinance. Microfinance is one of the most famous banking services in developing countries. Especially, microfinance has a big impact on society in developing countries. Newly industrialized countries (NICs) are a good example of countries that succeed to use microfinance well in the world. It serves low-income individuals or some group who do not have access to financial services which provided by banks. Microfinance provides the loans with small interest. Poor people can repay the loan because of small interest. It allows giving these low-income inhabitants an opportunity to be self-sufficient or independent by providing them with a way to save money, borrow money and get insurance. In addition, I will explain the purpose of microfinance which includes comparing and contrast. Microfinance is focused on people who are low standard life in society. Especially it helps people who work for agriculture. In some developing countries, major livelihood activities are still mainly based on agriculture that includes rice cultivation, animal husbandry and aquaculture. These activities are frequently affected by natural disasters such as droughts, typhoons, and floods. The economics professor Muhammad Yunus who is the founder of Microfinance made many goals with United Nations. The International Year of Microcredit consists of five goals. The first goal is to assess and promote the contribution of microfinance to the MFIs. The second goal is to make microfinance more visible for public awareness and understanding as a very important part of the development situation. Also, it focuses on the promotion should be inclusive of the financial sector. Then, make a supporting system for sustainable access to financial services. It supports strategic partnerships by encouraging new partnerships and innovation to build and expand the outreach and success of microfinance for all. Microfinance has many types of goals. However, there are still problems in this support. The biggest issue is the effects of raising income levels for the poor can often be questionable. Although it raises the possibility of income accumulation and savings, microfinance products also raise the possibility of creating a further indebtedness that may potentially extend the cycles of poverty for an infinite period of time.

II

Next, I will explain the profits of microfinance in big scale. The first advantage would be that individuals usually turn to microfinance institutions for emergency credit due to banks slow response rate. I found that every state-

owned bank has the same problem and some customer still complaining about it. The function of microfinance allows personal loans to individuals with a quick response time providing them with sufficient capital to meet emergency monetary issue that may happen. Generally speaking, people who live in even urban area may not have a connection to response to monetary problems. Also, some developing country's government struggle with the monetary issue. The modern economy is always changing throughout the year. So it provides a good connection to respond to these issues. Then microfinance also encourages self-sufficiency and entrepreneurship in the country. Especially entrepreneurship of the younger population is important to lead the country successful and developed. In some developing country, many young people have small and medium enterprises have viable business plans. However, most of these countries lack sufficient funds to set up costs and run their businesses. Microfinance offers business loans that could be used to start and expand businesses allowing them to meet their working capital requirements. This activity can help the independent of the younger generation and encourage the fresh idea of young people. These things are the advantages of big scale microfinance functions. Then, I will talk about small-scale microfinance advantages. First, it provides access to funds for anyone. Most of the case, people who can't access funding through banks acquire financial services through unreliable financial services. Also, most banks do not offer loans to low and middle-income earners because of their employment history, lack of financial security and the nature of their occupation. Because of this, the bank can't believe they can pay back the loans. These things make afford of poor people, so they will have more available money for that. For example, the parents use the money for school pay of children. Then they can get a higher quality of education. Most of the case, it difficult to pay school fees or find themselves having to settle for cheaper schools because of lack of available funds. However, there are some problem and drawbacks of microfinance. A main disadvantage of microfinance is that the deal is too small for the lender to get enough money and devote enough time to deal. From this, default rates by the borrower is always high. Borrowers seldom if ever give lenders the full story on their situation and with a small amount at risk, it does not make sense for lenders to spend a lot of money to check out the story. When lenders get burned, they decide to stop microlending and the next round of microlending must be done by greenhorns who have no idea what they are getting into. In other words, to some extent microlending depends on an ever-increasing number of lenders in order to be successful. Then there is not enough prove which actual effectiveness of microfinance as a factor for economic growth. Some economist argues that we should focus on microfinance which will encourage less spending on other infrastructures or some assistance such as public services, welfare, and education in developing countries. This is kind of big scale issue and some developing countries don't exist economic factors such as inflation or interest rate. These specific factors actually don't have effects on these countries. In addition, some economists found that there is a lack of help of microcredit programs women, especially who have children especially who live in developing countries. For example, there is a gap of funds which can rent to the borrower between men and women. Because of this, men usually use the money for their work or new business. However, women dependent on loans for household expenditures rather than capital investment. This is the big problem on a small community and most the men are working for their family. Then women mainly take care of their children and using the money for the household. It means they can't afford to start a new business. This also leads poorness of women's social advancement.

III

Based on these, I will talk about the mitigation for big scale. The first mitigation would be risk management. As I mentioned in the second essay, risk management is the biggest issue to run the business in developing countries. there might be a lot of conflict between renter and customers. In this case, it is important to reduce the risk and keep the mutual agreement. If MFIs check the creditworthiness and repayment probability of the loans, it can lead that they can avoid taking very serious risks to a certain extent. In addition, some economic factors such as inflation and deflation have an impact on Microfinance, because, when the economy goes not well, they have to cut the money that rent to the customer. This is very important to keep the one country's benefits. Then, Technological advancement also needs to be improved. Big-Sized banks such as state-owned bank have sophisticated software for risk management and operational management, which MFIs lack. Therefore, they have to rely on old techniques for processing any activities. They have to create a new project from microfinance. For example, in some developing country, the new business and financial idea which come from the younger generation had encouraged and adapted. The next improvement would be changed the insurance clauses. MFIs are insured against loan defaulting, and most insurers process claims in event of a death of the borrower, encouraging many MFIs to harass the borrowers to the point of dead people as a joint and multiple responsibilities. In some country, they still accept this old style of microfinance. This trend has to be stopped. Then, I will talk about the mitigation in small scales like small community and individuals. In the second essay, I wrote about the drawbacks in the small community. There is some problem with the disparity of the amount of money which went to women or men. Of course, men get more money from microfinance. This trend indicates modern society as well. The equality reflects to the various aspects of society. From

these things, I will suggest that it is necessary that understanding the underlying market failures is the key to designing effective financial services and interventions. Some Economists suggest that we only know the potential of financial markets when information flows freely and symmetrically, when participants choose rationally, when property rights are enforceable, and when transaction costs and barriers to entry are low. In developing economies, market failures and distortions are so strong that all five conditions often fail at once. Then the second mitigation would be understanding the roots of these market failures and the evidence on the efficacy of existing structure of financing services, it will allow the next generation of financial services to better serve the world's poverty. Also, it will be mitigation to improve the behavior to women. It will fill the gap the amount of money to the women. In addition, women often do not have control over their own property, they use the money for children and household. Many rural markets are served by monopoly providers. So I think it can be possible that United nation establishes some organization which checks the microfinance in all over the world working properly and eliminate the monopoly provides all. United nation should invest money to prevent the flow of these malicious providers.

IV

In conclusion, there is still a disparity between rural areas and urban areas. It is caused by bad monetary access or poor infrastructure of the country. People who do not have property to live will be a "vulnerability" of that country. I think these developing countries which have a lot of vulnerabilities is weak in the world and will not be high living standard country. I insist that the government should not use the money for urbanization. They should use the budget for countryside infrastructure. I believe the improvement of countryside situation will lead the promotion of services of microfinance. Microfinance has big success and it ensures that they will improve the situation of local people life. However, I actually found that there are doubting microfinance really have that impact on poverty as the improve the situation in the developing country. Some of the microfinance in some of developing countries are running a business as microfinance illegally. There's also some microfinance institutions charging excessive interest rates. This is exploiting the project and prevent the improvement of rural circumstance. Also, I found the problem which is there are limitations in the rural area to provide official services of microfinance. Some illegal renter runs the business and they don't give a customer suit help. Also, there is a lack of help of microcredit programs women, especially who have children especially who live in developing countries. In addition, There is not enough prove which actual effectiveness of microfinance as a factor for economic growth. Some economist argues that we should focus on microfinance which will encourage less spending on other infrastructures. It uses lots of money from the country budget. Based on these problems, I think there is some problem of lack of understanding to the microfinance. Through the research, I realized that some of the customers don't understand the structure of the microfinance, then They misunderstanding that they can borrow money anytime and any case. However, the microfinance is the national financial projects, so there must have some limits. I don't mean to blame the poor people. From these things, I will suggest that the customers need to try to understand the how microfinance works and process of borrowing money before they planned to borrow them. I think that kind of the first process is important to prevent the conflicts between renter and borrower. The conflicts also lead the bad reputation. I think microfinance is the legacy of human history. So government encourages to know about microfinance for local fisherman, farmer and any worker who might have a risk to lose their job. Then, big-sized banks have sophisticated software for risk management and operational management, which MFIs lack. So government invests in the new infrastructure of the microfinance. They need to refresh all of the structure.

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How to keep Japanese food in the future Hikari Kobayashi

Japanese food is a traditional food and Japanese style. Japanese style food and features the seasonal feeling such as season. Japanese food is registered as intangible cultural heritage in 2013. In this essay, I will explain about three causes of Japanese food. What Japanese food is, Japanese food culture and how to keep and protect Japanese food in the future. What should we do if Japanese food is lost in the future?

I

First, what is Japanese food. Japanese food is a traditional food. It uses the taste of the food itself, and features the seasonal feeling such as season. Japanese food was registered as intangible cultural heritage in 2013. The characteristics of Japanese cuisine are which utilize the diversity of food taste, express nature, seasonal expression. The menu of Japanese cuisine consists of rice and soup, prepared dish. Traditionally there are customs with the left on the top, so it is often the case that placing the main meal on the left side or arranging the fish head leftward. And the basic form of Japanese cuisine, which combines vegetables staple food with fish side dishes, begins in the Nara and Heian period.

Next, the most popular Japanese food in foreign countries are 10 Yakitori, 9 Karaage, 8 Udon, 7 Soba, 6 Tonkatsu, 5 Curry, 4 Ramen, 3 Sukiyaki, 2 Tempura, 1 Sushi. There are many Japanese foods that Japanese people eat. foreign-originated things, there are a lot of dishes that are becoming original in Japan now. All foreigners are saying that all Japanese food is "Japanese food." Next, the most popular Japanese food in Japan. 10 Tonjiru, 9 Sarada, 8 Gyoza, 7 Japanese Curry and Rice, 6 Yakimiku, 5 Yakizakana, 4 Miso soup, 3 Ramen, 2 Sashimi, 1 Sushi. The best Japanese food that Japanese people and foreign people like is Sushi. There are many kinds of Japanese food. So what you like in each country is different. However, sushi is popular in any country.

II

How to keep and protect Japanese food in the future. Current situation of Japanese food. What is Japanese food from a foreign country? About health. Japanese food is very healthy, many foreigners have a meal life with only fast food and hard tastes. The Japanese food has a taste and a good impression because taking advantage of the taste of ingredients of characteristic Japanese food. Japan is called the country of longevity. Therefore it is said that people can live longer like Japanese people if they eat Japanese food. So the image that Japanese food products are safe is strong. First, Japanese food in China and Taiwan, the menu of Japanese style, In the past 10 years it has increased by 6.3 times, and specialty shops by Japanese companies targeting Japanese people and targeting local Chinese are rapidly developing stores. There are currently more than 200 shops in Shanghai as Japanese restaurants, which has been increasing rapidly since 2002. In this restaurant, a list of wide fields such as yakiniku, ramen, farmie restaurant, okonomiyaki from the Japanese restaurant is open.

Next, Japanese food in the United State. Restaurants called Japanese foods have about 9,000 restaurants, 2.5 increase in 10 years in United State. Many of the managers are Asian immigrants such as China, South Korea, Vietnam. luxury sake is gaining popularity mainly in New York. There are about 3,000 Japanese restaurants in California state. We look at the demand for sake which is the most popular in the United States. Japanese food is very famous and popular. So there are plenty of shops. There are various shops depending on the country because the thing that the country demands is different, and the manner of Japanese food is different depending on the country.

III

If the Japanese food will be lost in the future, then how to keep protect Japanese food well. Japanese food is very famous food in the world so if Japanese food will lost now, what happen in the future. First, Countries with lots of Japanese food and popular. Asian food is famous for Japanese food because Asian countries' foods are similar to Japanese foods and tastes are similar. Therefore, Japanese food is popular in Singapore, China and Philippines. However there is interesting thing that Mexico ranked 4th. Mexico is not in Asia and it is far from Japan but Japanese food is popular in Mexico because the famous Japanese food is very popular and there is evidence that many people are interested in Japanese food. Among them Sushi is the most popular and famous among them and there are many kinds of Sushi in the world that Japanese people cannot imagine.

Next, child and young people cannot make Japanese food well now and in the future. Because it becomes an adult without knowing the taste of Japanese food. This is a biggest problem. The biggest crisis is when children become adults, born children won't make Japanese food. If that continues, Japan's unique food culture will disappear from Japan. When people stop telling the Japanese food to the future correctly, the wrong Japanese food is transmitted. At that time, Japanese food will disappear. Foreign tourists may also decrease. Because Japan is very famous for

traditional things, most tourists come to see it, so if Japan disappears traditional food, Japan's attraction will be reduced. Japanese food is said to be healthy. So, if Japanese get away from Japanese food, the longevity, which is a characteristic of Japanese people, will be lost and obesity may increase. Finally, behavior protecting Japanese food of Japanese. If Japanese food decreases, the popularity of Japanese food will decrease and if popularity diminishes, the interest of Japanese food also goes away. However Japanese food was registered as a World Intangible Cultural Heritage as a traditional Japanese food culture. But it was the chefs of the old-fashioned restaurant of Kyoto who registered the Japanese food as a cultural heritage and said that they would pass along and pass on the future of traditional Japanese cuisine. It mean the chefs are also afraid of the crisis of Japanese food fall. There is also one of the backgrounds that registered appeals to foreigners by making Japanese foods an intangible cultural heritage. On the other hand, people are beginning to forget Japanese food and eating habits when the movement that remains as a heritage occurs. The Japanese meal style is said to be the ideal nutrition balun. By skillfully using "Umami", people realize a meal with less animal fat and oil, which helps longevity and obesity in Japan.

IV

In conclusion, Japanese food is a Japanese tradition and it is necessary to protect it but it is a difficult thing for example, it is impossible for children to start cooking immediately and parents may not teach children Japanese food. I think if Japanese food disappears in the future. There are many crises, children born in the future cannot eat Japanese food at home. In addition, it will cannot touch the traditional Japanese food. In the future, the charm of Japan known as tradition will disappear and Japanese get away from Japanese food, the longevity, which is a characteristic of Japanese people will be lost and obesity may increase.

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Foods and Cancer Hikaru Toyoda

Breast cancer was found from my mother I was the first grader of high school. So far she made healthy meals to my family and she did healthful exercise. I wonder why my mother suffered from breast cancer. I thought some writings and articles about breast cancer and foods. Then I found modern nutritional science is not fits to recent our eating habits. Nutritional science is not old science and it started spread late 18 century. Therefore nutritional science is not perfect and it advance day by day. However according to Cancer Information Service, National Cancer Center, Japan, breast cancer patient in 2013 is about 76800 people. This number is about 21% of whole cancer patient. In 2012, the number of cancer patient is increased approximately two and a half times of people from 1985. In this essay I will talk about our meals and consider to prevent cancer by pros and cons, effects, and solutions essay.

I

There are several causes of breast cancer like heredity, westernization of meal, late childbearing and increasing single women. According to Cancer Information Service, National Cancer Center, Japan, breast cancer patient in 2013 is about 76800 people. This number is about 21% of whole cancer patient. In 2012, the number of cancer patient is increased approximately two and a half times of people from 1985. Thus in this chapter I am going to focus to westernization of meal including pros and cons of our normal meals including frozen foods, retort foods, and snacks.

First I will talk about benefits of our normal meal. Our normal meals have many merit for us. First benefit of our normal meal is easy to get and eat. There have a lot of kinds of frozen foods, retort foods and snacks in supermarket. These are very convenient and handy to eat because frozen foods and retort foods need just heat up. Also they are cheap and easy to pack so we usually use them for lunch or busy day. Second benefit would be these taste are good every time we eat. Fast foods, frozen foods, retort foods and snacks are made in factory so every things are same taste and usually these taste are loved by all generations. In addition, they have many variety of foods so there have so many appearance and interesting tastes and they please us. The last benefit frozen foods, retort foods and snacks are keep for long time. Usually they are vacuum packed and bacteria are don't get into the food so these foods are safety for bacteria and we don't need worry about rotten foods. According "Incorporated administrative agency National Life Center", frozen foods are good for vegetables normally frozen vegetables are harvested at seasonal time and is refrigerated immediately. Compare nutrient of frozen vegetables and normal vegetables, frozen vegetables are much better than normal vegetables. The reason of this is almost nutrient are destroyed when we boiled or take a lot of time to display at supermarket.

On the other hand, our normal meal including many bad things too. Frozen foods, retort foods, fast foods and snacks are including a lot of salt, fat, sugar and chemical seasoning also these foods have preservative and pesticide residues so these are very bad for health. Specifically, salt, fat sugar lead to metabolic syndrome, diabetes, hypertension, cancer and so on. First, frozen foods, retort foods, and snacks are including a lot of dairy products. Dairy products are mostly bad for breast cancer and prostatic cancer. According to "Cancer Information Service, National Cancer Center, Japan" and "Minister of Health, Labour and Welfare", Dairy products including many fat and these are A large quantity of intakes of the animal fat are causes of sickness such as colon cancer, prostatic cancer and breast cancer. According to "Standard tables of food composition in Japan 2015", milk has 51% fat and cheese has 72% fat per 100 grams. Also, dairy products has calcium but green vegetables like komatsuna, kale has more calcium than dairy products. Thus eating dairy products is nonsense to keeping health. Second, these foods are contain a lot of unsaturated fatty acid and it is cause of hypertension, heart disease, metabolic syndrome and other lifestyle-related disease. According "Ministry of Agriculture, Forestry and Fisheries", The average quantity of the trans-fatty acid eating per day alone a Japanese is 0.92-0.96 grams in 2008. WHO and FAO announced the targeted value such as total fat, saturated fatty acid, the unsaturated fatty acid to take out of food in 2003 assume an intake of the trans-fatty acid less than 1% of total energy intakes. But Japanese meal is equivalent to less than approximately 2 grams per day per person. From these facts, our normal meal is not healthy. Third, process food lost their nourishment especially particularly, vitamins and a dietary fiber of vegetables and the fruit disappear. the wheat flour is lost as 60% of vitamins after polished.

Next drawback would be, chemical seasoning have a bad impact to sense of taste. As a example, "Ajinomoto" consist of L-monosodium glutamate and Sodium 5'-ribonucleotide and all of them are additive. The glutamic acid is included in kombu or dried small sardines and these are the natural taste ingredient but L-monosodium glutamate is associated artificial glutamic with sodium artificially and this impact to our body. In 1968, there was the Chinese restaurant syndrome that the person who ate Chinese food appealed to for symptoms such as a headache, a toothache, the flushing of the face, the numbness of the body. This is a happening about L-monosodium glutamate

and in 1969, indicate bad influence for body. The last disadvantage would be the high processing foods lead to a disorder of the digestive organs also some of the function of the stomach and intestines is spoiled. It is inflamed, and this becomes a cause of lifestyle-related diseases such as arteriosclerosis, a liver disease, diabetes that the disorder of the bowels is chronic.

As a conclusion for this chapter, our normal meals contain a lot of bad things for our health. Generally speaking frozen foods, retort foods and snacks are very useful and great things for us. These things makes our life much easier and happier but including many bad substances for our body. One of the cause of breast cancer is obesity and these foods are contain a lot of fats. The cancer cells multiply under the influence of female sex hormone (estrogen). This postmenopausal estrogen is produced by fat, not the ovary. Therefore, registrant to breast cancer, we need cut these foods and eat more natural things.

II

In this section I am going to talk about three effects including effect of drink milk, effect of eat dairy product and how dairy product effect to the breast cancer.

First, drinking milk has many bad effect for body. One of biggest effect of drinking milk is cause of abdominal pains and diarrhea for many people. Some people experience stomach ache or diarrhea after they drink milk. I had many times too and I don't like to drink milk because of it. Reason why we get stomach ache and diarrhea after we drank milk is we don't have enough lactase to digest milk. Milk has a lot of lactose and we need lactase to digest lactose but about 85% of Japanese people are lactase deficiency and don't have enough lactase. It is normal for us and generally speaking, lactase deficiency is normal for mammalian because we drink mother's milk when we were baby so we have lactase to live but after wean, we don't need lactase to live because we can eat other things. So lactase deficiency is natural phenomenon for mammalian and human too. Japanese people were agricultural people and we start to eat dairy product about a hundred years or less. So lactase deficiency is normal for Japanese people. But almost northern European and northern American people has enough lactase because they were the ethnic group did dairy farming to live. The area that these people lives are cold and short daylight hours so these area is not good for agriculture so they eat dairy product and meat to get vitamin and protein and these people eat dairy product from long time ago like thousand years or more and it like same thing as Japanese people. We have many amylase than other countries people because we eat rice for long time.

The second major effect of eat dairy product is problem of calcium. We learn milk has a lot of calcium and good for our bone and health. But according to Food composition database, dried sardines, small fish, Hijiki, sesame and other vegetables contain a lot of calcium than milk. Also calcium absorptance of milk is not higher than other foods. Search into details of ingredient of foods, kale has 163 grams of calcium in 100 grams of them and absorptance of calcium to our body is 59%. Also boiled leaf of the Japanese radish, Daikon has 220 grams of calcium and absorptance of calcium is 56% but milk has only 110 grams of calcium and absorptance of calcium is just 32% so milk doesn't contain many calcium that we think. One's worst enemy of milk is phosphorus because phosphorus dissolves calcium and milk contain a lot of phosphorus. According to Food composition database, milk contain 93 mg of phosphorus. So when calculate simply, only 17 mg of calcium left after phosphorus dissolves calcium. But phosphorus is contain in many kinds of foods and these phosphorus dissolves calcium of the bone and phosphorus tied to calcium of the same amount in accord with the body and become calcium phosphate and am excreted outside a body so milk is not good for get calcium. Many north American people are osteoporosis and one of the reason of this problem is drinking milk and according to Osteoporosis Canada, at least one in three women and one in five men will suffer from an osteoporotic fracture during their lifetime and 2 million Canadian are affected by osteoporosis.

Lastly, eat dairy product is also effect to the breast cancer. Dairy product contained a lot of protein and fat also there is concern milk contained hormone of the cow. According to Cancer Information Service, National Cancer Center, Japan, taking many animal fat and protein is cause of cancer. Generally speaking, animal protein is the material which is hard to disintegrate for human. So our liver get a lot of stress when we eat meat. Liver is a place where digest animal protein and liver cell make many cells when digest them so Genetic joining errors become easy to happen and produce cancer cells. Cow hormone acts on sex hormone such as estrogen so it become a cause of breast cancer. Reasons why milk contained cow hormone are period of start milking a cow after a cow gave birth is become short and farmer administer to a cow hormone drugs and other chemicals.

III

In this section, I am going to talk about problems and solutions of about foods, nutritional science and cancer. There are a lot of good aspect of satiation period whereas we also got many problems too like obesity, diabetes and cancer. I focus on the cancer especially breast cancer to prevent it from our meal.

First, rise body temperature is most easy way to protect body from many sick and cancer. Generally speaking, low body temperature people are easily to get sick than high body temperature people. As one fact, according to “Japanese Society for Thermal Medicine”, usually cancer cell become weak over 42°C and if body temperature is high, immune cell work actively but hypothermia (low body temperature) people are usually easily to get sick because immune cell don't work well. Also some doctor and reports said when body temperature rises 1°C, immunity will rises 30%. Additionally, rises body temperature has many merit for body for example, compare two people has 36°C body temperature and 37 °C. Basal metabolism will increase more than 10% when body temperature rises 1 °C so body will become hard to gain weight because the environment becomes easy to digest an enzyme the most. Make a connection with meals, popular foods and drinks to keep body warm are ginger, root vegetables, winter vegetables. These vegetables are classed as positive foods in Macrobiotics (*1), one of the eating theory from Japan and thought are from ancient Japanese and Chinese eating habits and a dietary cure. Summer vegetables, tropical fruits are classed as negative foods and these cooldown body temperature and usually positive food vegetables contain less water than negative foods and has many nutrients to keep body warm.

Second, eat detoxification foods like vegetables, fruits, beans help clean your inside body and become hard to get sick. Immunity and the metabolism increase by excreting a physical unnecessary thing and can expect the prevention of a cold, prevention of aging. Also absorption of the nourishment increases when blood circulation and a lymphatic flow improve. Dirty blood is cause of all illness. The toxin which collected in the body by various causes creates active oxygen. When active oxygen increases in the body it give damage to a cell and genes and it cause the aging processes such as a lifestyle-related disease, cancer, a stain or the wrinkle. Most easiest things to clean blood is eat detoxification foods. Foods makes our body and can be healthy and unhealthy that you ate. In general, Cuttlefish, sea alga, Japanese radish, wheat embryo, sardine, tuna and some other foods has high detoxification and these foods help enhances the function of the liver. Liver is one of internal organ that clean blood and takeoff many kinds of poisonous substances that we got from outside of body. Also Leek, onion, apple, avocado, asparagus, seaweed and other few foods has chelate effects so good for body to lose a toxic substance which bloods and organ has. Chelate effect is an action excrete harmful metal to the outside of the body. Usually we took in small amount of some harmful metal like mercury, arsenic, lead, cadmium from outside of body by eating fish and meat. If harmful metals flows in blood, it carried to the whole body and has various adverse effects. According “Natural hygiene”(*2), one of the eating theory from America in 1987 from a book “FIT FOR LIFE” said eat only fruit for breakfast and eat whole food of the low fat vegetable food for lunch and for supper and do not eat the animal food (meat, fish and daily products) or reduce it also this theory said don't eat carbohydrate in same time when eat animal foods. This theory helps well for my mother's breast cancer as dietary therapy.

In the last, processed foods are usually included chemical and some holmons that help to glow cancer. According to a book “Natural Hygiene for Ladies”, Most everyone likes fried foods but heated oil and fat produces acrolein and it is carcinogen. Most people think plant oil are good for health but after heated plant oil, structure of the fat turns into trans-fatty acid and it will reduce immunity. Also, acrylic amide occurs produced when baked, fried, cooked carbohydrates and it is carcinogen. In addition, these foods contain a lot of sugar and sugar helps a candidal increase so it become cause of Renal insufficiency, Alzheimer's disease, heart disease, Cerebral infarction, Colpitis and other illnesses. In the worst thing Hormon in the dairy product and milk can be most cause of breast cancer and uterine cancer. Dairy products and milk cause also osteoporosis too and can't get calcium than we thought. Frankly speaking, we especially Japanese people can live without dairy products and meat because eating habit of these foods were imported in Meiji period from weston countries and we don't have enough digesting system than them also before then our ancestor didn't eat these things a lot and just eat vegetables and some fish, eggs or beans for protein. Most recommending eating habit for healthy life is eat vegetables and whole foods. Meats and processed foods taste nice but give bad effects to our body.

As a conclusion for this chapter we should reconsider modan nutritional science and find new eating habits which fits every people. Little by little change dietary life and make our body to prevent illness. All foods which we eat build our body.

IV

In conclusion, including pros and cons, effects and solution of modern nutritional science and cancer, recent foods are very useful and great things for us however these foods contain many fats, chemical seasonings thus not good to eat regularly. In our life, it very hard to eat only healthy things. Usually people like to eat junk food and there are a lot of foods which bad for health but taste good. I don't say you have to cut convenient foods including frozen foods, retort foods, snacks and many others. Make sure check ingredients if you want buy these foods. But if you want be healthy and don't want suffered from serious illness and cancer, you should cut them and eat healthy. My

mother was got breast cancer but she did Natural hygiene as dietary therapy and she proved that things we ate has great impact to our body and good meal for body can be makes healthy. So I think the best way to protect the body from diseases is change the eating habit.

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Improving the Food Customs in the Republic of Haiti Hina Deguchi

There are many countries that are in trouble about the poverty as food. Especially, the republic of Haiti is famous for the poverty because this country faced various unfortunate accidents and disasters. Moreover the alias about this place is "The poorest country at the southern hemisphere" and this country is so penury and difficult to solve it. Therefore, I was interested by the theme and led me to think about solutions for it. Moreover the alias about this place is "The poorest country at the southern hemisphere" so it indicates that this country is in penury and that it is difficult to solve it. According to the worldometers, the population is increasing gradually from 1950 because the Republic of Haiti had been dominated by the United States and the French on the historical happening originally, but the rate of population growth per year is falling reciprocally because of the disasters. The rate in 1950 was 1.72% and the peak was 2.37% in 1983 and this rate is very high for the growth of population because the rate in Japan is so low even it is abundant and not poverty. Also it dropped to 1.23% now, this rate can be thought two types of viewpoints like too much population makes more demand so decreasing this rate is not big deal or decreasing the growth rate of population indicate the manpowers will be running short someday and the condition of poverty must be more terrible than now so we have to consider and focus on this problem right now. In this essay, I would like to talk about three factors that cause poverty then how to improve and solve this trouble for the citizen in the Republic of Haiti that they can eat more food than now. A way to solve the problem of earthquake which exploit the Red Cross so I want to introduce the job description about it. This organization respect 7 principles humanity, fair, neutrality, independence, service, individual and universality as helping each Red Cross's organization in anywhere and almost main 3 actives in this group which rescue the people who is in trouble, grow them and support their life. This organization recruit people who is interested in helping to other people so there is no case that lack of manpower whenever and one of good point about this organization which doesn't discriminate people even they belong to any religion or own other skins color. There are three factors that cause poverty. It is important to improve and solve this trouble for the citizens in the Republic of Haiti, and the best way is to fully understand the challenges and causes to the problem.

I

A way to solve the problem of earthquake which exploits the Red Cross so I want to introduce the job description and why this idea is the best for it. First of all, the first reason is a big earthquake which happened on January 12th in 2010. This earthquake affected damage to the country, invited confused and led the citizen in the poverty situation because there are not enough fund to help people like fixing traffic condition, support to give foods and improve the sanitary supervision. Unfortunately, there were many people that had injured and lost their own important friends, partners and family in this accident so it indicates that the citizen cannot work to help each other and there is nobody to help this country. As a result, the amount of people who got injured is approximately 300,000 people and the number of people who lost their life is about 220,000 to 316,000 people and the people who hadn't found until now is approximately 900 people so this disaster supposed to decrease the population dramatically even the country is so confused the manpower shortage for improve poverty. Then the pretext why lots of people were involved by this one is the earthquake which had magnitude 7 caused closely that most citizen crowded to live in. Therefore, it supported to influence a big damage to the population, and most people who had a job about as the doctor or the nurses were squashed the hospitals or the schools by the effect from the earthquake so this moment, there is nobody to have the knowledge of medical care like deciding what's kind of sickness, where was broken and why some symptoms were caused. Moreover, there is a case that people can't spend at their house and have to live at the tents even 5 years had passed from the accident and living at the same tent for long time had possible to make new problem like getting stress, make the argument with other peoples who live at same area and cause illness. In addition, I would like to talk how can we solve this trouble and the key thing is the World Vision that explores people who has afford to provide money for children. Almost price for fund raising is about 1.5 dollars for a week which is same as the price of a bottle of water so it won't be burden to continue this action. From this offhand price, there are many way to improve the children and their family's lifestyle as giving clothings, food and education. Moreover, there are enough information about each children who are in trouble about poverty so we can find and choose anyone from them so there is authenticity proof and it is established by United States and except Japan and its, 88 countries has the offices in each places and we can see that 106 countries don't have them so if we increase the number of them, the amount of people who aren't afford to live will be helped more than now.

II

Another cause of poverty and not being able to solve this problem is the lack of education. NGOs need to further help citizens from the dirty hygiene environments. Most people think the content of organisms between the

NGO and Red Cross seems similar but it's not so I would like to talk about the difference as compared with them and how can support to the Republic of Haiti from now. For this task, I read a book of "Haiti after the earthquake" which is written by Paul Farmer. Also, the content of this book is listed about the details after a big earthquake attacked this country and the experience that he faced some scene. For instance, many patients that they got injured were taken care by the nurses or doctors who hadn't get the permit of physician or there were accidents that the electron stopped to work and they couldn't chase even we stay at something public institution so it means that the government doesn't have afford to help their own citizen but the main source to make as this situation is the lack of information like how to support their citizen and put down the condition. Also, there is a reason why the government is lacking about education that the country had dominated by the United State between the 19th century to the beginning of the 20th century and the Republic of Haiti had a long term to be dominated by some country as French about 500 years historically so this happened gave an effect that the Republic of Haiti had started to depend on the colonial ruler. As a result, the modern situation of the Republic of Haiti can't help their people because of the information's shortage and support to process for something collapsed by the disaster. Nevertheless, there are other accidents from the earthquake. For instance, the spilling of the oils from the storage pond, debris about broken buildings that occurs approximately 40 to 50 % per a each city from the information of the UNEP and the biggest havoc for environment is amount of the forests because before the percentage of forests indicated about 60% in the area but it changed to only 2% now and a reason why I feel that one is the biggest case is the forest that has a role to prevent the flood or landslide, but it fell so a few numbers suddenly even the water is getting worst steadily then there is nothing to protect from them now. In addition, the education system in the Republic of Haiti, there is four term to study between like the kindergartens to universities but almost schools were collapsed the earthquake so they don't have any institutions to develop the diligence. Also, the way to help citizen from the dirty hygiene environment which use NGO and it doesn't ask money from the clients which is same as Red Cross so this one is believed to support people by the world. There are 2 types of fund raising as child sponsor and cooperation with the government or united nations. Also, each part of groups are belonged by many countries so it won't be lack of money to help people. The percentage of using money to the organization is 1.9%, public relations indicates 16.6% and the remaining 81.5% is for local activities so there isn't useless way to use the money. For example the way to cooperate with other groups in Japan, it works together as JICA, JPF, WFP, UNHCR, UNICEF and the Ministry of Foreign Affairs. From this point, we can say that the country tries to cooperate with many organizations all over and this organization make events as doing speech about each countries information like culture, war and poverty so it would be support to spread out more exact information of the Republic of Haiti to be focused by anyone or countries.

III

The final reason is unskilled the hygiene management. For example, there are many kinds of epidemic diseases as the cholera germ, malaria, AIDs and tuberculosis and the most reasons how those illness appears frequently is the severity of the hygiene. Moreover, the government had noticed this reason but it didn't anything to improve so the problem hasn't solved yet since today. Moreover, before the Republic of Haiti had experienced the earthquake, the water condition in this country is known that the quality is the worst in the area of the southern hemisphere so there are many people who has the sick by the aqueous contagion so the cholera germ has a position in that one. However, by influencing the earthquake, some parts of cities had submergence and many domestic animals were involved it so the content of the water got more worth than before then the people who had lived in the place became to be affected easily by the contagium. Moreover, the people gathered to live in same tents during the most areas in this city were collapsed by the earthquake so there was possible to appear the infectious because the government couldn't collect all corpses quickly so most of them were remained alone until the country became to have an afford to do it so the putrid odor was too bad to live but there was no way to avoid from it, so they had to patient to spend the time.

IV

Overall, there are three complicated reasons that create the situation of poverty in the Republic of Haiti and those ones affected some difficult influence to the environment for solve. The solutions of these three causes are making propaganda in the country to collect people who is fine to help and improve the situation that was broken by the earthquake, collect some doctors who aren't professional of operation to open the class because doctors are thought that they are cleverest in the country as speaking other country's language as English and counting numbers for improve the lack of education then the final one for hygiene environment is making toilet which can be switched the bedpan for not to spread out the bacteria and use defecation to the farm like Japan got used to being manure for growing crops. I think that problem it too difficult to solve which most countries cannot afford to do that and they have to maintain the good situation of the economy so there isn't possible to help to other country like this country because the supporting country won't get any benefit from helping it. I think that getting the information about the

country that is in trouble about poverty like the Republic of Haiti is better way than we don't do anything because this activity has possible to touch someone else move to solve like this country. Finally, I think that this country need something new project that citizen can works as soon as possible because the total about three causes of the big earthquake, poor quality and amount of education and hygienic conditions came from the poor economy as fund then it could be a key thing to change the situation better than now. We can conclude that there are many types of organizations to support countries which are confused by any troubles and one of the reason why the Republic of Haiti can't solve the poor condition is lack of information about its on the internet or any devices because most or all countries think important about themselves certainly. This country needs something new project to improve it as cooperating with other countries or ask help to them so organizations as the Red Cross, World Vision and NGO are so efficient way to solve its. The key thing to take action against this problem which tells lots of information about the poverty condition how it is terrible as using the situation about citizen's food custom because most people don't know the country that is in poverty or not popular.

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Taking Action for Food Security Kano Shimazu

Nowadays, climate change and global warming are still worse, and, we, the earth are facing a crisis. The world environment is being still worse, and climate is changing badly, as the biggest problem climate change, for example rising temperature, drought damage, extreme events such as typhoon or hurricane, warming oceans, shrinking ice sheets, rising sea level, rising atmospheric carbon dioxide level, heat wave, unbalanced ecological system. However, both rich and poor countries are unprepared for climate change on food security and do not even know how affects it to us. Actually, climate change is already affecting what, when and how much people eat. In 2014, for example, drought has ruined crops Brazil's southeastern breadbasket, including the valuable coffee harvest. In California, crops have got damaged across the state, which produces almost half of all the vegetables, fruits, and nuts grown in the US, by the worst drought in over 100 years. But behind the phenomenon, our eating habit also have strong effects on climate change. Today, it is believed that temperature will continue to rise, more drought and heat waves, hurricanes will become stronger and more intense, so we won't able to produce food and keep eating unless we change and solve immediately. In this essay, I will show that three causes why there get hurts by climate change, or why it is being harder to keep cultivating crops and eating every day (our eating meats culture, food loss habits, and developed transportation systems), how our eating get damaged by climate change (rising food price, water supply and risk of being extreme poverty), and how can we fight and stop climate change (replacing beef to beans, compost food waste, and replacing plastic bag or other tools to reusable tools for food).

I

First of all, in this world, almost all people like eating meats, and it is the main intake source of protein. It is our food culture and people know how tasty meat is. So people can't replace it with other food easily. However, the process of producing meats especially cow has a negative effect on the environment. Currently, the methane gas emissions, which is about 25 times powerful than even CO₂, from the agricultural sector has a large impact on climate change. According to FAO (Food and Agricultural Organization of the United Nations), 37% of methane emissions are from livestock in total methane emissions, and 38% of methane gas emissions are occupied by cattle burps in agriculture. Also, 78% of methane gas emissions are explained by non-dairy cattle and dairy cows. Also, overall, greenhouse gas emissions from cattle are too big, beef production contributes 2.9 gigatonnes or 41 percent of total sector emissions while emissions from milk production amount to 1.4 gigatonnes or 20 percent of total sector emissions. In spite of that fact, today, it is well known that carbon dioxide (CO₂) is discharged too much, and lead problems around the world, actually it occupied 85% of the proportion of greenhouse gas. And the methane gas has only 15.8% on greenhouse gas, but as you can see it's more influential, therefore the methane gas emissions from the agricultural sector, especially producing cows, is an exactly too important key of global warming and climate change. Nowadays, we produce beef more than 68 billion ton a year, but parts that we can eat are only half of a cow, so roughly 170 million heads of cattle were produced per year. Then, back to cattle's burps, cattle discharge 36 to 72-kiloliters of methane gas a year. By a simple calculation, each 170 million cattle discharged 72-kiloliters of methane gas, so roughly 123 billion kiloliters of methane gas were discharged a year. It is a too large number of greenhouse gas and large impact on climate change.

Wee people, who live in developed countries or affordable countries, waste food, which can be eaten, it is called "food loss", unintentionally. In spite of one in nine people can't access food, nearly produced one-third of the food in the world, double amount of food aid is lost or wasted. It is around 1.4 billion hectares as land, which is about one-third the world's total agricultural land is used to produce food that is wasted, millions of gallons of oil are also wasted every year to make food that is not eaten. Food wasting occurs all over the world, but in different ways in every part of the world. In high and medium-income countries, 40 percent of food loss occurs due to oversupply in markets by consumers. On the other hand, in low-income countries, food is rarely wasted by households, but 40 percent is lost during the post-harvest and processing stages instead, usually because of poor infrastructure and lacking technology. By wasting food, carbon dioxide and other greenhouse gas are discharged at burning. Currently, around us, 30% of food is wasted on the supply chain, and contributing 8 percent of total global greenhouse gas emissions. In this way, we usually produce carbon dioxide, methane, nitrous oxide, hydrofluorocarbons (fluorinated gases used in refrigeration) by ourselves unconsciously, and destroy the environment by our hands. We waste water, is limited on the earth, and destroy biodiversity as well. And we need to remind that emissions resulted from producing and processing, packaging, shipping, storing, picking up and cooking are also wasted.

Nowadays, the global transportation system for our everyday eating cause climate change, the food travel from farm to our dish is being wider and wider, it's travel an average 1,500 miles in the United States. Before 4000 B.C., people used to use the simplest boats or horses to transfer, but it is limited to not so far away. After that, the

Watt steam engine was invented in 1769, and it was enabled distance transfer, but started to destroy the environment instead. 150-mile trip was taken 32 hours with a steam engine was accomplished in 19 century, and many types of transportation from sea route to air route with fossil fuels were invented in 20 century, and it made transfer much convenience. By developing transportation technology, it enables to trade or transfer much faster and easier across the world or inland, and we can get or buy everything globally. In contrast, burning fossil fuels like gasoline and diesel releases carbon dioxide, a greenhouse gas, so transportation discharges too much CO₂ and other greenhouse gas, actually transportation sector is the first place with 28% on total U.S greenhouse gas emissions by economic sector with 6,511 million metric tons of CO₂ equivalent in 2016 (same proportion with electricity). However, as you can see, we can't choose the way that we never use them at all to live in this society, now transportation is definitely an essential progress for us.

II

Climate change affects food prices conspicuously all over the world. According to a recent statement presented to the U.S. House Committee on Agriculture, the Consumer Price Index, an average prices for food or every other household goods is projected to rise from 3.5 percent to 4.5 percent by end of 2018. Today, 80% of the world's crops are rainfed, and drought and water shortages are expected to affect the rice production which is a staple food for more than half people on the earth. And, now, in South and Southeast Asia, 23 million hectares of rainfed land of rice production are already subject to water shortage, and recurring drought affects almost 80% of rainfed rice growing areas in Africa. Global warming is the biggest problems in the world, the climate is changing every moment. Then these phenomena affect global food prices, it is one of the key to increasing food price. Our food, crops are ruined by climate change that is not enough or too much rainfall, a hot spell or cold snap at the wrong time, or extremes, like flooding and storms. According to Intergovernmental Panel on Climate Change (IPCC), land for crop declines of 10% to 25% may be widespread by 2050 due to climate change, also rising temperatures are predicted to reduce catches of the world's main fish species by 40%. If agricultural sectors are ruined by climate change, produced food from under the sea to land will run out and be more valuable at the same time, also every country needs to import more and more. Therefore it will because of the rising price of food. According to the FAO, changing climate condition has both environmental and socioeconomic outcomes for agriculture, changes in the availability and quality of land, soil, and water resources, and later reflected in crop performance, which causes prices to rise.

While nearly 70% of the world is covered by water, but only 2.5 percent of it is fresh and ready to use. Even then, just 1% of freshwater is easily accessible, including not liquid forms that glaciers and snowfields. Substantially, only 0.007 percent of all water is available to use for its 6.8 billion people. Whoever people need water to survive that is not only such 60 percent water consist human body but also the resource for producing food, clothing, and computers, moving our waste stream, and keeping us and the environment healthy. But our freshwater, drinkable water, water security is in crisis because of climate change. Climate change causes various changes in our water supply, mostly it changes raining patterns that extremely high level or extremely low level. High levels of rainfall could damage important infrastructures like sewer systems and water treatment plants and lead to polluted water that brown or cloudy. Heavy precipitation could also lead to increased runoff of fertilizers, sediment, trash, and other pollutants into water sources. However, if rainfall will increase, it offers more chance to access water. The source of freshwater is only rainfall, climate change can increase the amount of water that the atmosphere can hold, which in turn can lead to more and heavier rainfall when the air cools. Although more rainfall can add to freshwater resources, heavier rainfall leads to more rapid movement of water from the atmosphere back to the oceans, reducing our ability to store and use it. Also, warming also means that snowfall is replaced by rainfall and evaporation rates tend to increase. On the other hand, rainfall is also reduced by climate change in some areas. In fact, in the sub-tropics, climate change is likely to reduce rainfall in already dry regions. Although, melting inland glaciers by higher temperature will also increase water supply to rivers and lakes and water will be more accessible which will cease once these glaciers have melted, it leads drought or extreme floods, so it's not always good impact but also bad impact.

Today, 75% of the world's poor and food insecure people rely on agriculture and natural resources for their livelihoods, but it's ruined by climate change or global warming, it is affected badly by climate change. For example, rising temperature, drought, unusual precipitation patterns, hurricanes. If the place without better infrastructure encounters climate change, they can't harvest crops and lose land for a farm to get their daily meal, even enable to live minimum living. In fact, many people are still fighting extreme poverty and struggling extraordinary weather events in many countries worldwide, although 200 million people have been lifted out of hunger and prevalence of chronic malnutrition in children has decreased from 40 to 26 percent during the last two decades. As I mentioned before, climate change leads not only too much rainfall but also a shortage of rainfall, so both types of area are hurt by climate change, preconditional in the area has poor soil and weather is likely to be poverty and get hurt easily by extraordinary climate events. For food insecure people, agriculture is the only way to get money and alive the day, but their lives

are in crisis due to waste food or our eating habit in developed countries. Although they rely on farming to keep their lives, climate change ruins those and leads to extreme poverty, climate change and being poverty is continuous.

III

Recently, in spite of so many better choices for the environment we have, we can't choose that way due to our culture, also we know deliciousness of meat. However, it has a large impact on climate change, roughly 123 billion kiloliters of methane gas, which has twice as bigger power as CO₂, is discharged by cattle a year. If we know this number, we cannot ignore the impact on our environment, and cannot eat without hesitation. But, now, there are breakthrough alter food of meat, it is beans. Beans are also protein from plants, and with contemporary technology, it can be processed like a meat. Also, there is a way to be Vegetarian that is the simplest way to against climate change, but it is quite stressful compared to replacing meat to beans. These days, you can see soy milk and soy meat wherever you buy food, being famous and popular more and more especially among young women, because it is many low calories than real meat and real milk, so sometimes it is used for their diet, of course, it has great possibility to fight climate change. According to Harwatt and a team of scientists from Oregon State University, Bard College, and Loma Linda University, if every American people change one dietary that replace beef to beans, the U.S. will be able to come close to meeting its 2020 greenhouse-gas emission goals which are pledged by President Barack Obama in 2009. And, it is believed that even if people do not change transportation and any other electric systems, and even if people keep eating chicken, pork, cheese, and eggs, it will be achieved between 46% and 74% of the reductions that needed to meet the target.

In this society, almost all people have been on like these conversations at least once, at home or at school, could be a restaurant. Unfortunately, it is also one of our cultures, and these food losses or food waste destroy the environment. We are worried about a shortage of meal for every family members so people cook enough to be full or a little over, and developed countries' people hesitate to eat food that is near the expiration date. Sometimes it happens due to lacking communication, as the example mother made a meal for a child, but the child has eaten with friends. These are only a part, but by so many reasons, or sometimes without reason, double amount of food which is supporting developing countries is wasted. Do not waste food is the best way to fight climate change, but people often do not waste food to destroy the environment and it's an essential process for people to keep a healthy diet. Therefore, if people need to waste food reluctantly, they should compost wasted food to use for farming. According to an analysis in the U.S., Americans composted all of their food waste that 250 pounds per person annually, it would save 24.3 million metric tons of greenhouse gas from being emitted. Also, in a study on the efficiency of household composting, they found that, on average, composting saved 277 pounds of waste per person a year, as a result, researchers showed that organic waste that is normally be placed in a garbage can be reduced by more than 80%. Some people think that composting is dirty but it is far from the truth, if people choice right way and suit way depends on where they live, and it's the simplest and easiest way to reduce greenhouse gas emissions in each home.

Throwing food away emit much greenhouse gas and lead climate change, but also food loss with products that are made by plastics, using at dining at home, a restaurant or a cafe, discharge CO₂ or other greenhouse gas as well. For example, wrapped biennial for food in a store, a package for meat or fish or straws for a cup of cafe latte. But, during production and incineration, about 6 kg of carbon dioxide is created by per kg of plastic. In fact, over 480 billion plastic bottles were sold worldwide in 2016, about one trillion single-use plastic bags and more than half a million plastic straws are used annually, over 141 million metric ton of plastic package were thrown in 2015, people use 500 billion plastics cups every year. Human is the obvious cause of global warming, so it should not be used if people can. Actually, Starbucks had decided to be going to replace plastic straw to strawless lid globally by 2020. As you can see, global warming and climate change are one of the biggest problems, and we are part of the causes of climate change. We need to change our dietary from smaller things around us. To fight global warming, such as reusable water bottle would be helpful to against to emit greenhouse gas by each individual, almost all people had drunk bottled drinks at least once, PET bottles, or use own reusable bags for shopping to not use single-use plastic bags at the store. If all people use own bottle and own bag, CO₂ emissions will be reduced remarkably.

IV

In conclusion, through this essay, I showed three causes of climate change, three effects of climate change on our eating, and three solutions to against climate change. As you can see, we, developed countries' people need to take action to stop climate change, make no more extreme poverty, and reduce the disparity between countries and communities across the world. Obviously, our dietary causes the poverty around the world, but almost all people have not been interested in poverty or changing climate around us, or do not even know. Now, people have so many ways to change and solve the phenomenon, but they do not reform it, because people do not feel so hard the danger of climate change, and they had known joy for eating. But if our eating is not good ways or the unsustainable way to eat,

we must reconsider our habit again. I think that people do not have much knowledge about it, itself, is the severest problems in this world to keep our lives on the earth. For our bright future, I would be a person who takes action and leads a better environment through food.

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Rice Consumption Kazuma Taniguchi

Rice is in critical situation. The amount of average annual consumption of rice is getting lower. According to the Japan times, although a person ate 118 kilograms of rice in 1960, it had dramatically declined to 61 kilograms in 2016, and accordingly the number of rice consumed has decreased half in 50 years. Therefore, there is significant decline in the food self-sufficiency rate from 73% in 1965 to 38 % in 50 years. In this essay, I will aim to propose to find the way to protect farmers by saving rice industry. Firstly, I would like to show problems why rice consumption got a dip, mentioning globalization, urbanization, and declining of farmers. And then, in order to find what those problems above made farmers to lose their jobs, I will list similarities and differences between the time when rice is consumed well and now, regarding to types of farmers, and the social problems happens in the periods. At the end, by the problems, similarities and differences of now and before, I will find solutions for the dip in the number of farmers and decline of rice consumption, by considering new business for farmers and foreign business relation.

I

First of all, in terms of globalisation, it made us able to supplement things we are lacking by importing from the other countries. Also, in the beginning of globalisation of Japan, Japan had forcefully been made to import from the United States, due to the loss in world war 2, which is called Americanization. Then, the alternative food for rice appeared, namely bread. Since then, bread had widely become generalized in Japan. Which can be seen in the increase in the amount of importing wheat that used to be 2833m in 1960 to 5800m in 2017, according to Index mundi. The trend has begun when the Japanese government provided only bread instead of rice as a lunch in school. It had done because the Japanese government had to consume the large amount of bread that America exported. Furthermore, it I said that there that eating rice made people be stupid. Then, according to World grain.com, the consumption of wheat per person has grown dramatically at that period around 1960 when wheat consumption was approximately 25.8 kilograms to 32.9 kilograms in 2013. In 2016, the total wheat consumption was more than 6,000 tonnes. Thus, it can be said that wheat has become an alternative food of rice since the amount of consumption is almost the same as that of rice now, which made rice less needed.

According to the world bank, there is a significant decrease in agricultural land, which used to be 19.89% of total land in Japan in 1961 to 12.396% in 2014 owing to development of infrastructure, as an example, constructing highway. In fact, a farmer was forcefully taken his orange field away to build highway. Also, from Japan Hoppers, because mountains cover approximately 70% of Japan, it is geographically difficult to construct more agricultural land. Furthermore, according to World Meter, population has increased from 1955 to 2017 by about 40 million. This increase makes even harder to supply rice for all of the citizens, which made Japan to rely on foreign countries to import food in order to fill in the blank that the lack in rice had made. Also, because the number of people mentioned earlier need residents, in other words lands, the agricultural areas which accounts for large space of lands, are needed to provide them a house.

Lastly, with regards to the declining of farmers, it has been serious problem year by year. According to Japan times, even though there were more than 7 million farmers in 1970, it is just under 2 million now. And also, according to the world bank, urban population rate had a dramatic increase from 63.213% in 1960 to 93.021% in 2016. Which means, urban drift is current trend for especially young people moving to urbanised areas to get jobs. This is because they think there is no jobs preferred in rural areas, or agriculture which is one of the tasks that the Japanese government should encourage to make them to involve in agriculture; otherwise farmers in Japan would disappear. This could really be real as half of farmers are over 70 years old now, and more importantly there are about 604 thousand farmers who are 75 or older. In other words, in a decade, most of farmers would quit their jobs as farmers. Even though there are still young farmers, the current problem in Japan “aging society” is also what makes so sudden to lose our farmers in 10 years.

II

For those problems in rice consumption, I would like to consider the similarities and differences between the farming we used to do when the consumption was high and there were sufficient farmers, and the way we do now to contemplate the solution to the problems.

Firstly, with regards to similarities, the number of “non-commercial farming” which is sort of non-farm employment, does not cultivate more than 0.3 ha of land, or make more than 500 thousand yen with products, and “side business farm” of which household where all of farmers worked fewer than 60 days in farming or more than 65 years old have not significantly changed from the period when rice was well consumed. Moreover, world rice price

which is approximately 3 thousand yen per 60 kilograms has remained stable since 1986, which means it can be said that the value of rice in the world is the same as before.

On the other hand, there are many differences between before and now, and mostly those are negative changes. Firstly, aging society is one main problem. Although the percentage of the age between 15 to 64 years old of all ages in 1950 and 2015 is almost the same, the percentage of 0 to 14 years old has become third time less. Also the proportion of over 65 years in 2015 is about 9 times higher compared to that in 1950. Then, young people who succeed to be farmers have been decreasing. In addition, the diversity of jobs, new kind of jobs appeared currently, such as IT engineering and programmer, have been making young people want to live in urbanised areas where agriculture cannot be done. Followed by that, excess of urbanisation was happened, there is therefore an increase of population living in urban areas from 53 percent in 1950 to 93 percent in 2014. This is not only the number that tells how many people begun to live in Tokyo, this also illustrates that the development and the extension of urbanised areas everywhere in Japan. Moreover, due to globalisation, we can easily get foreign food, and technologies. Thus, Market Price Support in 2006 had a dip to a third of that in 1986, which is 3 trillion yen. It is because Produce Price has got lower form 19 thousand yen per 60 kilograms in 1986 to approximately 2 thousand yen per 60 kilograms. Furthermore, PSE standing by the Producer Support Estimate was about 47% in 2014 to 2016, which was still three times higher than OECD's average, which has however decreased from 64% in 1986 to 1988. Then, because of those, all income for rice farming by farm size, namely harvesting and threshing, weeding, planting, and plowing have become much less since 1960, besides some of them got 10 times less. Therefore, the amount of income for cultivating rice had declined to around 140 thousand yen since 1960. As a result of them, despite more than 17 million farmers, which accounted for 50% of total of workers after the World War II, the number shrunk to 1.81 millions in 2010 while the population has been getting larger. In particular, the number of "semi business farm" of which salary is less than half of their total income, and there is at least one family involved, who are under 65 years old and engage to cultivate for more than 60 days, and "the business farm", of which only difference from the former one is that the salary by farming is more than half of their total income have become less than half from 1990 to 2005.

III

As I listed similarities and differences, now I can suggest how we can solve the decline in rice consumption by referring when there were enough farmers and a high demands for rice.

First of all, companies should be involved in agriculture. It does not matter whether or not the companies are related to agriculture. Employees from a company can work for local farmers, and the employees shift their work per a year and other employees next work in agriculture. This can make young people take positive about being a farmer as the reason why they do not prefer an unstable jobs (farmers) is solved by doing this, which are caused by for instance the climate change, difficulty to keep health of themselves, no holidays, necessity of having their own business. Then, the decline in "the semi business farm" and "the business farm" would not be problem. Furthermore, engineering companies can develop AI for agriculture. Hence, it would make farmers not necessarily need considering when to plant, harvest, and fertilize or when to do them. It allows companies to research the technology, and therefore can increase both rice consumption and technological skills which could eventually be replaced for farmers.

In addition, doing Japanese style of agriculture in developing countries will be powerful to keep rice as a sustainable food. In fact, according to the agriculture ministry, Japan has begun to rely on non-Japanese, around 24 thousand foreign technical intern trainees were waiting as a farmer in the end of October in 2017. In other words, it is possible to cultivate with foreigners, and therefore there is one more way, which is Japanese farmers go abroad to cultivate Japanese rice, or Japonica rice under the same environment as Japan. This can teach how to and also increase the consumption of rice, and lastly farmers would not lose their job. Because Japanese people tend to prefer foods (vegetables and meats) made in Japan by its trustability, it can be said that products made in developing countries by Japanese people would be favoured by Japanese people to buy. Also, the reason why it should be done in developing countries is because it can solve problems Japan is facing, for example, lack of agricultural land due to overpopulation, urbanisation and mountain, and weak support from the Japanese government. Furthermore, local farmers in these countries can be employed as the same value of the salary as local, or cheaper. According to Asia magazine published by Be Global Inc., the average salary for a person per month is more or less 8000 yen. Also, according to Annual Report of Statistics on Japanese Nationals Overseas from Ministry of Foreign Affairs of Japan, there are 68 Japanese companies in Myanmar, and there it is possible to expand business in developing countries.

Finally, rice harvested in Japan should be exported. This is rather advantageous way to make money and keep farmers as a farmer because while market price was decreasing, world price remained stable, and thus rice can be sold as its value. Therefore, for two solutions mentioned earlier, one business can be made, which is doing agriculture in developing countries, namely Cambodia and Myanmar with Japanese companies and with Japanese farmers. (thus, it is not matter whether the company is related to agriculture). This is because, firstly rice is well

cultivated, and arable areas are increasing in Cambodia. Furthermore Cambodia - Japanese Relations is powerful relationship, and consequently for Cambodia, Japan is top providing country, and therefore it might not be difficult to have business relations. Moreover, because geographically the distance between Cambodia and Japan is close and World price remains stable, it would not cost so much to export rice to Japan. Accordingly, products can be exported to around asian areas with ease. The total population in 2012 of east Asia (Japan, China, Korea, Mongolia, Asia NIEs, and ASEAN) is over 200 billion, according to IMF, of which total GDP is higher than the US and EU. In other words, even though the demands for rice would decline in Japan, there is still market rice would be wanted.

IV

By all counts, and with proven results, it is no wonder that the number of Japanese farmer has been decreasing owing to the less demands for rice. In background of this, current social problems are significantly related such as globalisation, aging society, urbanisation and overpopulation, which caused the less arable lands. Thus, in order to protect Japanese farmers not to lose their jobs, it would be necessary to make them jobs by accepting foreigners living in Japan as farmers and teach them how to harvest rice, or making them a job as a farmer in foreign countries with its local farmers. However, the more we rely on foreigners, the less the rice consumption would be, and therefore, the most importantly exporting rice abroad made by Japanese would help farmers to keep their job as a farmer.

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Droughts in Thailand and United States

Keisuke Nakajima

Droughts are one of the worst natural disasters in the world. A drought is a lengthy period of time, stretching months or even years in which time; land has a decrease in water supply thus having a great impact on agriculture, populations and the environment itself. In any part of the world, a drought can occur. This is a normal and natural disaster which can affect any country in any part of world; and this is a recurring element of climate. Countries and areas which have terrible droughts and water shortages have been reported include many Asian countries such as Thailand, Vietnam and Philippines more frequently in recent years. Also, even in the United States, agricultural districts continue to suffer extensive damage, and furthermore the situation of droughts will expand, the global food supply may also be affected. In this thesis, I would like to talk about effects, causes, and possible solutions regarding droughts in Thailand and the United States.

I

These days, global warming and abnormal weather have advanced, and drought problems are getting worse. Drought will cause significant damage to agriculture and livestock production and eliminate important forests to keep the atmosphere and temperature on the earth. In 2007, it was concluded that “droughts have become more common since the 1970s” by the Intergovernmental Panel on Climate Change (IPCC). I will compare the drought between Thailand and United States, similarities and differences, to determine what society needs to understand and do about these droughts.

Firstly, I want to talk about the similarities of drought between Thailand and United States. Thailand has faced drought situations almost every year, including the current one. First of all, these are two similarities. Firstly, both of them are considered to be drought caused by global warming. Both countries understand the seriousness of this problem. The second is they have great effect on agriculture and their respective economy of each country by drought. The Thailand government said drought could reduce economic growth by 0.5%. The agricultural sector is under the influence of drought for the first time in 30 years and agricultural prices are beginning to rise. Thailand is one of the world's leading rice exporters, and other large companies are also active in the production of sugar, exports of vegetables and fruits. Production and export of seafood such as shrimp and tuna continues to expand. In addition, the period of the annual water festival held in the lunar calendar year is shrunk because the drought was considered. In fact, California state is particularly serious in America. On January 17, 2014, governor Jerry Brown announced the declaration of drought abnormalities. Also, according to the California drought analysis by the US Department of Agriculture Economic Investigation Bureau (USDA/ERS) and the census of 2012, nearly 100% of the vegetable field in the state, 90% of the meadow, 98% of the orchard are irrigated it is a target. The overall impact on the state economy may be \$2.2 billion.

Next, I would like to talk about the differences of drought between Thailand and United States. Thailand's drought has largely influenced mainly throughout Asia, which is their main export destination, but the United States has a great influence on exports worldwide because of its power. Moreover, although drought continues in Thailand, the drought in the United States is gradually improved in the United States. According to Thaivisa, Thailand has been experiencing the worst drought in decades, declaring disaster areas in 27 states. The rain is low and the temperature is unprecedentedly high. Full-scale rain cannot be expected for a while. According to Los Angeles Times, due to intermittent rainfall from the winter of 2016, the drought that California had been getting worse since 2012 has improved. While recovering from drought, there are residents who were seriously injured in the houses due to fear of dam break down due to heavy rain and floods and other evacuation orders.

II

Recently, many people talk about how climate change is said to be the main cause of drought. Of all the ways climate change inflicts harm, drought is the one people worry about the most. According to a Pew Research Center survey, droughts have been drier and lasting longer in recent years thanks in part to climate change. In 2012, the central and western US was hit particularly hard when 81 percent of the country was living in abnormally dry conditions, causing \$30 billion in damages and putting the health and safety of many Americans at risk. But droughts aren't only hitting the US. Many regions in the Middle East, Asia, and Africa are also experiencing higher air temperatures, drier air, and more severe or frequent droughts. I show some causes of drought in Thailand and United States, to determine what people and society need to know and think about solution against it.

First, I would like to talk about the cause of droughts in Thailand. The drought in Thailand is said to be the worst in the past 30 years. Thailand is in the rainy season for about 4 months from June to October, but rain hardly occurs in the dry season from November to February. The cause of the large drought is said to be the El Nino

phenomenon in which the sea temperature rises. This is also spreading to countries in South East Asia, South Korea and elsewhere. The El Nino phenomenon is a phenomenon that the water temperature of the sea surface becomes higher than usual in the waters off South west Peru to the center of the Pacific ocean. This is also said to be the cause of climate change. According to CNN(Cable News Network), the El Nino phenomenon seems to have occurred for 18 years. It is thought that this caused climate change, rain did not fall so much in the rainy season in Thailand, and drought occurred.

Second, I would like to talk about the cause of drought in United States. Historical drought has become a big problem in recent years in California, especially in the United States. It is believed to have three causes. First of all, the temperature rise. According to the weather information in California, the temperature has continued to rise, it has become recordable heat. This temperature seems to have led to the evaporation of a large amount of water such as reservoirs and agricultural plants. The second is a decrease in groundwater. In California where rainfall was ordinary low, groundwater was regarded as important. It is a big cause that it decreases. The third is a decrease in the amount of water in the near by water. The influence was exerted because the water of the river decreased due to the rise in temperature and dried out.

Third, I would like to compare to droughts between the United States and Thailand. As you can see, both Thailand and the American drought have greatly implicated climate change due to global warming. Drought is a difficult problem unless you think about water problems and their supply and demand. However, if the country is different, the size of the damage of drought may change depending on weather conditions, temperature, air, weather patterns. Climate change, which seems to be the main cause in the first place is also affecting agriculture, industry and everyday life. So, people are also cited as one of the causes of the drought.

III

Drought is taken up as a major problem in the world now. Drought is one of the problems to be solved that affects the economy and foods that people live. According to a new paper published in Nature magazine, it is believed that during the meteorological disasters that occurred between 1964 and 2007, there is a reduction in average national average of grain output. It is also suggested that abnormal weather such as drought and bad weather may cause great damage to cereal production around the world. In order to prevent what I said, various countries have settled solutions according to the situation of each drought. I present three solutions against drought in Thailand and United States, to determine what people should do and think necessity of solutions for society.

I would like to talk about the first solution, utilization of rainwater and water flowing into the sea. In the Thai industrial park (IEAT) throughout Thailand, we demand reuse of drainage and use of groundwater. In fact, every day at the LA County, one million gallons of water flows through the rainwater drainage to the sea. Sprinkler water and water used outside. This water collects all the dirt on the surface and flows into the sea without being purified. This is one of the causes of river and sea pollution, obviously wasting water. It is recommended that these water be recycled and used effectively. After rain, 10 billion gallons of water flows into the sea. According to the NRDC (The Natural Resources Defense Council) survey, it is estimated that 630,000 square · feet of water can be secured in a year when saving rainwater in the province and reusing it. This amount is about the same as the amount of water used in LA for 1 year.

Next, I would like to talk about second solution, water conservation measures. There are several water-saving measures taking place in California state. Especially in San Jose city, refraining from watering lawn and plants, if you want to raise water by all means, watering in the garden is limited between 8:00 pm and 10:00 the next morning. Sprinkler water is prohibited from spreading until it flows to the sidewalks and roads, water to be saved is kept until the shower gets warmer, and it is used for car washing and watering the garden. There are many ordinances such as providing towels and sheets only when requested rather than everyday, and drinking water provided at the restaurant only when requested. Governor Jerry Brown of California State issued the first historic water saving orders targeting the entire state in the state as a measure against the worst drought in the state which lasted for four years in the state did. They aim to reduce the amount of water used by all municipalities in the province by 25%, and will also invest in technologies to make California a drought-resistant state with water-saving measures to avoid unnecessary water use In the state of California hit by the drought, the use of water has been cut by nearly 25% from June 2015 to the end of February 16, and the water shortage has improved to a level that can be sufficiently supplied to about 6 million people over the year. Water savings totaled 24%, nearly 25% of the goal set by the governor.

Third, I want to talk about third solution, artificial rain. On April 4, Dr. Wallaught Kantiyanan of Royal Thai Rainfall and Agricultural Aviation Bureau of the Ministry of Agriculture Cooperative Association established a "Population Rainfall Center" in the 9 prefectures suffering serious damage as a result of severe drought damage expected It was made clear that there was an order from King Khmipon. A plan to spray dry ice or silver iodide on aircraft is effective. Artificial rain is aimed at increasing the water level of four dams of Thailand's main water sources

such as Bumipon, Sirikit, Pasak Chonrashit, Qua Neu Bumrung Dane. It was already carried out in part from March to June, and the amount of water increased slightly. As for how artificial rain is made, It uses chemicals on Cessna aircrafts machine, the chemicals react in the air, and make rain for more than 10 years. After spraying sodium chloride powder over the exclusive Cessna machine to absorb a small amount of water vapor in the air to generate the cloud base, potassium chloride is sprayed to absorb steam, and the generated thermal energy increases the rising air current make. To spread the silver iodide there, make icy crystals, rain clouds to make rain fall, to promote that cloud. It seems that dry ice is sprayed on the cloud bottom of the cloud, lowering the outside air temperature between the ground and the clouds and letting it rain. In consideration of the influence on the drinking water manufacturing factory and farmers, His Majesty's Order has instructed to establish an artificial rain production center at two places, Nakhon Sawang and Chiang Mai prefecture. At the same time, it started preparing for the operation of rain.

IV

In conclusion, as I listed these statement about droughts in Thailand and United States. Drought has big effect to economic system and agricultural system to each country. It would be a serious problem about the food which we have to get for ourselves, when it comes to the agricultural system. In addition, climate change is a global problem causes drought, as the drought in Thailand and United States are basically a result by the climate change. Human activities have a big effect on drought as well. We need to do water conservation to avoid drought, especially saving water could be the best way. Everyone needs to think about drought seriously and carefully to live better in the world.

In conclusion, there are some similarities and differences between Thailand and United States. There are negative effects to both the Economy and Agricultured system. I think that drought is not a problem that cannot be solved. Of course, it will not be healed unless global warming is fundamentally solved, but first of all I think that it is important for people in their respective countries to know about the seriousness of drought. I think that we should try to focus more on water conservation and water containment. I think that understanding droughts is the most important. Land and the environment are completely different in Thailand and the United States, but damage caused by drought is both almost received. Drought thoroughly devastates agricultural land, but no matter how much human civilization advances, there is no change that things that "people live by eating foods", and food no matter how much civilization advances, it is only made in nature. I think that the drought that stops making that food is a very big problem.

In conclusion, there are some solutions in each area Thailand and United States. Every solution are really good ideas. After all, I thought water conservation measures is the best solution. By making full use of water conservation measures such as ordinance, the sense of crisis will be transmitted to citizens as well, creating a common problem awareness. Also, there is an obligation to understand the importance of water and to use it efficiently without waste and it is best that everyone will cooperate after all. Saving water is a good idea because it costs less than other solutions. Drought is still a problem that has a big impact on people's lives and the economy. I believe that it is better to understand each one firmly and think about various solutions to other things.

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The Problem of Food Insecurity in South Sudan

Kotono Hirata

Although the fight against hunger continues to move forward, it is still at a loss to the food necessary for many people to live an active and healthy life that is unacceptable. According to the State of Food Insecurity in the World (meeting the 2015), approximately 795 million people around the world as of 2014 to 2016 are suffering from malnutrition and this is the proportion of one in nine people. In particular, the situation of food shortages has deteriorated recently in South Sudan. According to Integrated Food Security Phase Classification (IPC), in South Sudan an estimated 6.01 million (50% of the population) people are expected to be severely food insecure in June to July of 2017, compared to 5.5 million (45% of the population) people in May of 2017. In the first section, I will show you about three causes of food security in South Sudan, including armed conflict, agricultural stagnation and economic crisis, to decide which cause is the most influential. In the second section, I will show you about three effects of food security in South Sudan, including famine, impossible to support and increase in crime, to decide which effect is the most affected by the cause. In the third section, there are three solutions food insecurity.

I

One of the biggest cause of food security in South Sudan is armed conflict. United Nations Security Council recognized that main cause of scarcity of food is conflicts. South Sudan is included as a target country of that. In South Sudan, there were often civil wars occur and it continue still now. Despite the peace accords signed in August 2015, the government and opposition combatants continue to severely abuse civilians. The civil war which seems to have had an impact on food security in the recent, were the Second Sudanese Civil War, the Heglig Crisis and the Third Sudanese Civil War. The number of refugees because of these conflicts reached about 3.8 million people. As the number of refugees increases, agricultural activities are inhibited by manpower shortages. The stagnation of agricultural activity also causes lack of food.

The second major cause of food security in South Sudan is agricultural stagnation. There have not been much precipitation in much of South Sudan, and only 5 percent of cropland is currently cultivated. According to the Climate Change Vulnerability Index 2017, South Sudan is ranked amongst the five most vulnerable countries in the world with the Democratic Republic of Congo, Central African Republic, Haiti and Liberia. In addition, Sorghum and maize account for almost all of domestic productions in South Sudan, however there is no room in market with effects of surplus due to small farm size, low productivity and weak market incentives for sales. Accurate data about crop area and production for South Sudan are not enough, and especially since the renewal of armed conflict, there is substantial uncertainty in estimated value.

The third major cause is economic crisis. Recently, South Sudan has currency crisis. In the first, the South Sudan currency was not affected by the other local countries. However, when it began to be affected, the vulnerability of the financial sector in South Sudan was to become clear and the private financial obligation was higher than antecedent thought. The crisis got worse because the government could not adopt an effective policy. The currency crisis wreaked rapid inflation (especially the cost of food). Moreover, it combined with the influence of drought, it has broken the expectation of many return from poverty and declining in infant mortality.

II

One of the biggest effects of food security in South Sudan is famine. In some part of South Sudan, famine was declared in February 2017. The United Nations Children's Fund (UNICEF), the Food and Agriculture Organization (FAO) and the World Food Programme (WFP) announced that 100 dred thousand people are facing starvation due to food insecurity caused by the armed conflict and economic collapse. It is also said that more than 1 million people are on the verge of hunger. The UN-three agencies warned that more people would need urgent action to prevent starvation from dying. To this serious and expanding food crisis, if any measures are not taken, the number of people who fall into food shortages is seen to reach 5.5 million people in July when the peak of the harvest is reduced, called "lean Season". According to the Integrated Food Security Phase Classification (IPC), more than 40 percent of the South Sudan's population need pressing aid in the areas of agriculture, food and nutrition. The UN-three agencies have already complained that there is no limit to people facing famine and humanitarian support for people on the verge of famine as quickly as necessary to stave off a widening catastrophe. To prevent the spread of famine, we need to expand the scale of humanitarian assistance and deliver support to the most vulnerable people. However, there is also a problem that interferes with the support.

The second major effect of food security in South Sudan is that impossible to support. The support activities has been affected. There are issues such as support groups and UN staff members being killed. I make reference to some example. The United Nations Mission in the Republic of South Sudan (UNMISS) announced that in March

2017, six aid officials were killed in someone. According to the announcement, the six of them were nongovernmental organizations (NGO) members who rode cars moving from the capital Juba to the town of Pibor in eastern Jonglei state and they were ambushed there. Also, other day, the five staff members of the International Organization for Migration (IOM) were killed and injured in the central part of South Sudan. After entering the civil war at the end of 2013, approximately 80 people aid officials were sacrificed, saying at least 12 people had died this year. While more than 1 million people face severe food shortages, such as famine, there has been a succession of disturbances to such aid officials, and has become a major obstacle to support activities.

The third major cause is that increase in crime. Due to the armed conflict that began in 2013, the economy of South Sudan, which was originally vulnerable, is in critical condition. The income was eliminated due to the stop of oil production, and foreign currency shortages occurred. Therefore, a lot of living goods which depended on the import became shortage of goods. The dollar exchange rate for the South Sudan Pound, which is the local currency, has fallen by half compared to the previous one. (In June of 2016, moreover it is less than half.) In the last few years, it has changed from 1 dollar equal 3 pounds to 38 pounds and it is below 1/10. The state finances, which depended on oil for 98 percent of revenues, are in a state of bankruptcy, and unpaid salaries for civil servants and soldiers have continued. There is no doubt that these are leading to an increase in crime. In fact, there are people who have AK-47 hidden in the bag. It is equipped to attack the person who seems to have money.

III

One of solutions of food insecurity in South Sudan is solving the problem of food waste. Worldwide, 30 to 50 percent of food productions is wasted due to inefficient preparation and inadequate storage facilities. The United States is one of the biggest criminal for this problem's cause and needs 7 to 8 times more farmland bases than Indian land to compensate for this waste. In addition, sometime foods which is no problem never gets eaten. It might be because the farmer cannot beget to harvest an entire field or the store such as supermarket has ordered excessive of items and cannot sell it all. One way to diminish food waste is to redistribute food by giving them to food banks and similar groups. We can supply the foods of 413 million people annually by reducing food waste in the US, India and China.

The second solution of food insecurity in South Sudan is the education on proper manure usage. The use of proper manure is an important factor to grow agricultural productivity. The farmers in Malawi used the way of fertilizer developed 30 years ago. The manure was suitable for making nutritious soil. However, lack of knowledge to treat them properly and there was the issue which the depletion of many nutrients in the soil due to repeated cultivation of the same crops in the same soil. They are wasting good manure. Therefore, they will be able to efficiently produce more nutritious crops by receiving education about agriculture in the future.

The third solution of food insecurity in South Sudan is change of water usage method. Water is a big problem because it is indispensable for human life and for growing crops. Improving irrigation systems and planting crops that use less water would be an effective way to tackle that problem. For example, rice or sugar cane is one of the crops which most needed water. It would be better for farmers to avoid making those crops and they should grow the crops that do not require much water.

IV

In conclusion, there are three causes, effects and solutions of food insecurity in South Sudan. First, I think that the biggest cause is armed conflict. In terms of food security and food insecurity, agricultural stagnation may seem to be the biggest cause. Certainly, that's the direct cause but it is the armed conflict that is causing the agricultural stagnation. Next, I think that the biggest effect is that impossible to support. In South Sudan, due to decades of civil war with northern Sudan and crisis in recent years, there has been not little development, and basic infrastructure such as health, education and water supply, as well as fundamental social services such as electricity and roads, is critically lacking. In addition, because there are few governments and administrations in the region that provide these services, people who are equivalent to about 1/4 of the population depend on food aid of support communities. The support is the only help to live for them, and when it is cut off, their lives are become in a very dangerous state. Finally, I think that the biggest effective solution is that solving the problem of food waste. Food waste is probably mostly a matter of western countries, it is not directly related to South Sudan's food insecurity. However, the amount of food waste will be reduced by conscious of the fact that people in Western countries waste food. As a result, the surplus foods which people don't eat in Western countries will reach countries that are in need of food such as South Sudan.

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Obesity of American Maaya Ishibashi

Some countries have a lot of people who are obese. America is one of country which is famous for obesity. According to Public Health, now, more than 1 in 3 every adult and 1 in 4 every child is obese in the United States. The number of people who are overweight is increasing and it is said over half of Americans could be obese by 2030. In this essay, I will explain three types of current condition of obesity in America, society, perception and health to find the causes of American obesity, three causes why there are many obese people in America, society, food and life of American to find which cause is the most effective, and three solutions, society, economic and support of government to reduce obese people in America and I will decide which one is the most effective.

I

Nationwide, nearly one in six young people in America has obesity. America is famous for the country of obesity so first we need to know the situation of American to consider about this problem. In this chapter, I will explain three types of current condition of obesity in America, society, perception and health to find the causes of American obese.

Now, American society makes people obese. According to Public health, 3 in 4 Americans consume fast food monthly and half eat weekly. Only 1 in 3 adults exercise weekly and average of kids spend time in front of screen is 7.5 hours daily. The some causes why American people has such a life are only about 1 in 4 houses is nearby a park and about 23.5 million people don't have access to a supermarket within a mile of their home. From this, we can say American society is made for obesity people. For example, the demand of fast food is big in America so the number of fast food shop gets increased to get money and American people eat more fast food and they don't go to grocery store often because it's far. But if the number of fast food shop is decreased, American people will get angry so it's difficult to change society.

To realize American people are overweight by themselves is the best way to solve obesity problem. According to The Washington Post, in 2016, nearly half of America's overweight people don't realize they are overweight. However, in 1990, the percentage of American people who are obese or overweight was 56% and 48% of them thought they were overweight but in 2016, the percentage of overweight American increased to 70.4% and the proportion of them who realize decreased to 36%. This thing makes not American people exercise and try to reduce their weight. In addition, if parents are overweight and they don't realize, their children will also get fat and this thing will be replayed forever. But of course, there are American people who would like to lose their weight. GALLUP News says from 2010 to 2016, 60% of women and 46% of men in America want to lose their weight. From this, we need to think about how can we solve America's obesity problem.

Obesity is the biggest problem about health and it leads to death. According to Public Health, now, more than 1 in 3 every adults and 1 in 4 every children are obese. It is said over half of Americans could be obese by 2030. In addition, this is going to be a cause of 6 million cases of diabetes, 5 million cases of heart disease & stroke and more than 400,000 cases of cancer. In fact, according to healthline, the causes of death in United States was heart disease was the top with 24.1% in 2016. The 2nd biggest cause was cancer with 22.7% and the 3rd biggest cause was chronic lower respiratory diseases with 5.9%. America is known as country that happens homicides a lot but it was not ranked top 10. All causes of death of top 3 are related to obesity. Therefore, we need to think about obesity problem in America seriously.

II

I understood the current situation of obesity in America so far so next step is to find the causes of this problem. How people have obesity depends on them but it must have a trend of America. In this chapter, I will explain three causes why there are many obese people in America, society, food and life of American to find which cause is the most effective.

The United States eats the most fast food in the world. Burgers are the most popular form of fast food, taking up more than 50 percent of total fast food expenditure in the country. In addition, only about 1 in 4 house is near by park and about 23.5 million people don't have access to a supermarket within a mile of their home. Therefore, many American don't have an opportunity to exercise. This situation is bad but if government tries to change their life, American don't follow it. For example, in 2010, Michelle Obama tried to change public school's lunch to healthy food such as fruit and vegetable but many people against that so students threw away school lunch and the percentage of food waste in school increased to 56% and this project was canceled soon. Changing society is so difficult thing so it will be one of the biggest cause of obesity.

America is famous for fast food and Americans like fast food so much. In a study published in the journal Preventing Chronic Diseases in 2011, scientists found that eating fast food three times per week increased the risk of obesity by 33%. In addition, American fast food has much more calories than other country. For example, large-coca cola of Mcdonald in Japan has 181 calories. On the other hand, American large-coca cola of Mcdonald has 310 calories. American fast food is much bigger and has much more calories than Japanese one. But fast food is loved by American a lot. At least 1 in 4 people eat some type of fast food every day and American consume 31% more packaged food than fresh food. In addition, American spend 10% of their disposable income on fast food every year so fast food took root in the US the 1950s and has flourished into a \$255 billion industry. Fast food can make good American economic so we can't change food easily. Therefore, fast food of America will be one of the biggest cause of obesity.

Sleep deprivation makes people obese. According to Health Study researchers, at the start, all women were healthy but after 16 years, women who slept 5 hours or less had a 15% higher risk of becoming obese, compared to women who slept 7 hours every night. Also they had 30% higher risk of gaining 30 pounds over the course of the study. In U.S, the percentage of people who sleep 6 hours or less increased from 11% in 1942 to 40% in 2013. On the other hand, the percentage of American who sleep 7 hours or more decreased from 84% in 1942 to 59% in 2013. From these numbers, contemporary American are more likely to be obese than past.

In conclusion, there are three types of causes of obesity in America. All of causes are so effective to make American obese but food is the most effective cause because American food is made for American so of course they like them and they got used to eat fast food and big size food. When Michelle Obama tried to change school lunch to healthy food, many students disagreed against her and threw lunch away. It means they don't want her to change to healthy food and decrease school lunch. In addition, People who sell food also don't want to change to healthy and decrease food because American don't buy so no one want to change food except Michelle Obama. Moreover, fast food is one of culture so we can't change easily. From these reasons, food is the most effective cause of obesity in America.

III

Now, our life brings more obesity than in the past. For example, sedentary jobs makes people obese. Hard schedules brings people to buy fast food. We can get cooked food even we don't cook. In this chapter, I will explain three solutions, society, economic and support of government to reduce obese people in America and I will decide which one is the most effective.

TV commercial has an big impact for people's mind. According to a 2010 research study looking at television watching in young children, American children spend about 4.5 hours each day watching television and it is said children see average of more than 40,000 commercials a year. In addition, A report from the Television Bureau of Advertising and Knowledge Networks Inc. shows that 37% of television viewers make purchase decisions after watching advertisements on television compared to 7% for social networks. For example, if they show about the problems of obesity on TV, people can know about it easily and we can let them think about their diet. Therefore, TV commercial can give some effect for obese people.

Higher tax has big impacts to demands. If the tax of fast food increased, we can let obese people stop to buy high calorie food. As an example of this suggestion, in France, the tax of cigarettes were increased so the percentage of adult male smoking prevalence decreased. In 1974, the cigarette price index was 1.3 and the percentage of adult female smoking prevalence was 59% but in 2009, they increased to 3.3 and decreased to 39%. In Mexico, they added a 10% surcharge on sugary drinks in 2014 to reduce alarming levels of diabetes there. After one year, sales of such beverages fell as much as 12%, while bottled water purchases rose 4%, a study found. However, making tax high has a problem. The demand of fast food will be declined when tax rise because its consumers tend to be sensitive for price and the good point of fast food is cheap. Therefore, if we could rise tax of fast food, it will be a really big impact for obesity people. However, it is not only for obesity people but also for normal people and fast food market.

If government support diet of obese people more, people will have motivation so we can expect that the number of obesity will decrease. I suggest to require people to take a medical checkup and people who are diagnosed obese have to lose weight. If people didn't lose weight, they are supposed to have penalty. In addition, as a example of support of government for obese people, make the cost of gym free, they can get vegetable cheaper than other people can let obese people have motivation to lose weight. As an example case of support of government, Kingston Public Health in UK gave the Better Bones Osteoporosis Service to people who are ages over 50, have a relation with Kingston, and are at risk of or have already been diagnosed with osteoporosis or osteopenia. People had motivation to exercise and at the end of the course, it was found that there is an increase in confidence for getting up off the floor. Therefore, government supporting has an impact for their motivation.

IV

In conclusion, there are three types of solutions of obesity in America. All of solutions are effective to lose weight of American people but TV commercial is the most effective cause. Increasing tax and support of government make American people get mad and they will absolutely be against it. In fact, Philadelphia became the first major city this year to introduce a tax on soda and other sugary drinks, provoking public outrage. In this modern life, people watch TV almost everyday so TV commercial will be the most effective and peaceful way to let people know about obesity. From these reasons, TV commercial is the most effective solution of obesity in America.

There are three types of current condition of obesity in America. It can be said many things are related deeply to American obese. I think the obesity in America was developed and also it is developing a lot now. Many things are related deeply such as the number of fast food shop and the location of houses. In 2016, just around half of overweight American realize they are obese. In addition, obesity brings bad health. The cause of American death is related obesity. From these conditions, America needs to decrease the number of obese people. I think to decrease the number of obese people in U.S. is so difficult thing because they need to change the society. The number of fast food shop is many so American go to the shop even they decided to lose their weight. Obese people need to change their lifestyle but society must be changed to change their perception. Therefore, government must work for this problem.

Overall, the current situations of American obesity have big problems. American society is made for American lifestyle, American people don't realize that they are obese, and the number of obesity is increasing. The causes of this situation are American society, the thoughts of American which disagree with healthy food, and their life. The solutions of this problem are TV commercial, high tax, and the support from the government. Especially, I think their diet is the biggest cause and TV commercial has the biggest impact on this problem. So American love high calorie and big size fast food but if we tell the danger of overweight and taking lots of fast food on TV commercial, it will work to change their diet and weight.

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How the People Can Live as Usual in India Makito Yoshimi

Poverty is the serious problem around world. Almost all poverty in developing countries but it also exists in the developed countries. According to "most recent estimates of THE WORLD BANK in 2013" 10.7 percent people in the world spend less than 1.90 dollars (US) per day to live. And approximately 1.1 billion people removed from the extreme poverty so the number of people who live in extreme poverty is from 1.85 billion in 1990 to 767 million people in 2013. And then there are the reasons why the poverty is happened. However, there are too much countries which face to the poverty and it is difficult to focus on three types of poverty, so I will focus on the extreme poverty in India. According to a survey done by CNN, only five percent of India's surveyed population made enough to pay taxes, 2.5 percent owned a vehicle and less than 10 percent had a salaried job. Through over 50 years of support activities, I experienced something that is nothing to solve problems simply by supporting things. As an effective way to solve poverty, we will draw out the power of people in the area where they live, and will proceed with support activities step by step as follows. I will analyze the types of poverty, cause of poverty and solutions for each.

I

The first is absolute poverty. Absolute Extreme poverty is the situation where you can't have the minimum amount of food to survive. People living in absolute poverty tend to struggle to experience many of the deaths of children from preventable diseases such as malaria, cholera and diseases related to water pollution. It can also be the circumstances that do not allow people to have basic things or services such as education, work, food, health care, water, and energy. In usual, this type of poverty is long term problem, so it is from long time before and it cannot be seen in developed countries. Then the absolute extreme poverty is about 64% in the world and the 64% of absolute extreme poverty live in only 5 countries such as India, China, Nigeria, Bangladesh and Dem Rep Congo.

The second is relative poverty. This kind of poverty is usually related to other members of society and family. The cause of the relative poverty is unemployment, education, poor health, lack of access to affordable services and marginalization. If people in these situations people cannot get enough money to live or people cannot them children to go some other learning out of the school. For example if you can not take a vacation to go somewhere with family, or you can not buy a gift for a child at Christmas, Birthday or something other like these anniversary, or if you can not send young people to college, your family can be seen as poor. They can receive government support for food, water, medicine and free housings but poverty and everyone will be able to make the rest of the community to use excellent services and awareness.

The last one is situational poverty. The meaning of this kind of poverty is at the time when people in a unfortunate situation or the cause of the poverty is just one thing to be able to be poor such as earthquakes, floods or a serious illness. So in this situation, they have some possibility to be able to remove soon from that circumstance by themselves more than the situations which I explained above. If there are few helps from other person like relatives or friends, it can be solved faster and faster than doing that by themselves. Therefore, this is not serious than other two situations in above.

II

First of all, the high rate of the population increasing is the one of the main reason of poverty in India. This situation leads a lot of people cannot get the skill of literacy, in addition the lack of the care facilities, and also the lack of the roads to access to financial resources. Also the high population growth suffer the capital income of per person and it gives people less capital in come. It is expected that population in India will reach 1.5 billion by 2026 and then India will be the largest nation in the world. But India's economy is not growing at the same pace. It means shortage id jobs in India. For the worker in India, nearly 20 million new jobs would be required or the number of the poor people will keep increasing if there are no enough jobs will not be created at the same time. Ever increasing prices of even basic commodities is another reason of poverty. A person who is under the poverty line finds it difficult to survive.

The caste system and unequal distribution of income and resources are another reason for India's poverty. In addition to these, salaries for immature workers are very low despite the daily effort. The problem is in an unorganized sector. The owner does not care about the way of living and income of workers. The area of concern is mere cost reduction and profit increase. Because the number of workers looking for work is higher than the available work, immature workers have no other choice but can work at less expense. The government should actually find ways to impose minimum wage standards on these workers. At the same time, the government should ensure that this is successfully implemented.

Second of all, I am going to explain sluggish agricultural performance and poverty. Many economists point out that poverty rates are declining in the year of good agricultural production. Excellent performance in agriculture leads to more employment opportunities and falling price of food grain. More employment opportunities and lower food prices will make lower poverty rates. From the experience in Punjab and Haryana, with agricultural growth through use of new high yielding technology (popularly called green revolution), poverty ratio can be significantly reduced. However, in various states of the country such as Orissa, Bihar, Madhya Pradesh, Assam, East Uttar Pradesh, where the rate of poverty is still very high has no effects through to use the new high-yielding technology performance. It has not been good. As a result of this situation, poverty spread more widely, to compare with before to do this program. In addition, Indian policy makers have ignored public sector investment in agriculture, especially irrigation for quite a long period from 1980 and 81. As a result, irrigation facilities with high availability will ensure the adoption of new high yield technology, leading to high productivity, income, employment, and available at less than 33% of the land that can be cultivated. In addition, in many parts of the country there are many semi-arid rains, agricultural productivity, income, employment is not enough to ensure a significant reduction of poverty.

III

Third of all, the inflation and food prices are connected. The rate of the inflation and level of food prices is an important factor of the causes of poverty. Especially inflation, rising food prices, meet the basic needs but lower the necessary consumption expenditure to raise the cost. However, inflation, especially the rise in food prices, pushes many households below the poverty line. This is the reason why the Public Distribution System has been set to provide some foods or some other essential goods, for example Kerosene oil, standard cloth, pulses at subsidised prices are lower than the free market prices. However, most Public Distribution Ration Shops are located in the main city. Therefore the 70% of the total poor people who live in the rural or countryside cannot get any benefits from the subsidies provided by the government.

First, among the items to be enriched, it is probably the diffusion of education that occupies a particularly important position. If people in poverty do not understand their situation, they will not be able to get out of the vicious circle of poverty. We already know that the impact of ignorance on population growth, the spread of diseases, technical shortage, etc. on poverty is surprisingly large. In order to improve such a situation, it is very important to thoroughly disseminate education and to enrich its contents. Even if a lot of money is needed, investing in it is very significant. There is also a situation in which the amount of assistance is reduced as the result has not been improved so far, but that is a big mistake. Rather, it is required to increase the amount and sparsely invest in human investment. If the government or other countries acts like these thing, the people who can work at the company which has big proportion, IT in India will increase. It leads India to good way to improve as a one country then this is the one way to avoid from serious situation in India.

Second, the poverty is from the lack of jobs in India against the population. Then in India, agriculture has big proportion of the worker, it is approximately 170 million households in agriculture in India are about 700 million. As I indicated, India has so many workers. In addition the cultivation area of India is 1.13 times that of China, which is three times larger than the country, and the cultivated area is still increasing. However, the grain yield is a fraction of that of China, agricultural skills are behind schedule. Therefore if all of the worker has some knowledge about agriculture and if there are some machines to help the agriculture it must be improve in India. So Japan can send some machines to help, then the reward for that Japan will be able to some crops they can grow up by using some machines. If there are helps of machine, the promotion rate will increase and they can produce more the grain yield than China. From this, in the long term, the government has to have improvement of agricultural productivity and shifting excess surplus agricultural workers to manufacturing as an important policy goal that contributes to the elimination of poverty.

Finally, the investment for infrastructure is important. Unless basic facilities such as roads, rivers, railways, information communication means, sewers, schools, hospitals, etc. are in place, it is difficult for people's lives to stabilize. Most of the roads are uneven, and there are very many holes in the concrete. Furthermore, railway agencies are not well developed in India. If the number of train runs is small, there are few areas that can be reached by train. From the viewpoint of cost as well, it is not a situation where local people can use on a daily basis, so I usually used it as a way to walk on a railway track as usual, and even the figure of a lying person. The impact on the economy given by poor traffic conditions is greater than expected. It takes time to move because you can not speed up using a car. Moreover, traffic congestion and traffic accidents also occur frequently, so shipping of agricultural products and transportation of goods will not be expected. In this way, maintaining infrastructure is essential to solving poverty. It is obvious that a large amount of money is needed, but it is necessary.

IV

In conclusion, there are problems which is serious and there are some problems which is not too much serious. And the absolute extreme poverty is only in 5 countries. Then it can be a good thing because the government can focus to the countries. But India has a lot of percentage of the absolute extreme poverty, so it takes a lot of time to solve the situation. So it can be a good thing and a bad thing. Then the prevention of the relative poverty can be to make some new jobs which can employ people and does not need a specific license. At last the situational poverty is the poverty which is everyone has a possibility to be this kind of poverty, so it is difficult to prevent this. People need to prepare for that circumstance when they stand the situation. In addition, there are some causes that why the poverty is occurred in India mainly. It is difficult to solve these problems, it means the solution can be the new causes to improve the poverty in the future. Therefore people need to think good ideas to solve these issues in the future. In the next essay, I will explain some solutions for this problems. And then finally, the method to solve the poverty by to make people to be able to have any education to correspond IT or internet, to give to all of the worker some knowledges about agriculture and machines and the investment for infrastructure. If these are achieved in India, they will be the one of the biggest country in the world and the quality of the people's life much be better.

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Food Additives Mao Onishi

Recently Food additives has problem taken up by news. Some people say that food additives are dangerous. Food additives are those that are added to a food for a specific purpose in that food. For example, xanthan gum, used in salad dressings, chocolate milk, bakery fillings, puddings and other foods to add texture is a direct additive. Most direct additives are identified on the ingredient label of foods. According to the HRF, In Japan, the number one cause of death is cancer. The total number of deaths in Japan was 1,084,450 in 2016. Of those people, 323,914 people died from cancer. Accounting for 30.4% of the total death. There are 1500 food additives currently accepted in Japan. I have three idea about this topic: grow your own food in garden, cook yourself, use organic food. Japanese people make meals with an appearance and taste serious consideration. However There are a lot of people who die of a cancer to make an appearance better by food additive. Food storage raises preservation characteristics, and waste decreases. But preservation period is prolonged, hygiene management becomes negligent. It becomes easy to obtain the food of all the countries of the world. and hard to be corrupt by processing it. then, It can change taste to be palatable to the people of the import country by foreign food. On the other hand Original culture disappears. I think we should have patriotism. and we should transmit tradition to posterity.

I

Food additives can have different effects on people, not all food additives are necessarily bad. According to ERP and WHO, many people got food poisoning by food additive. 351,000 People die of food poisoning Globally every year. New data from the World Health Organization (WHO) reveals the growing problem of foodborne illness around the world. 582 million people is the number of cases of 22 different foodborne diseases experienced in 2016. 351,000 people is the number of associated deaths. 52,000 people is the number of deaths caused by the bacteria Salmonella. 37,000 people is the number of deaths caused by the bacteria E. coli 35,000 people is the number of deaths caused by norovirus. 40% percentage of people under the age of 5 who suffered from food-borne diseases.

Vitamins are needed for the human body to live. There are a lot of different types of vitamins for different regions of the body. For example, Vitamin B can be used for increasing energy, enhance mood, improve the memory, boost the skin and hair health and stimulating the immune system. Vitamin B as a food additive is used in vegetables, because they don't contain a lot of it. Next, Irons are needed in the human body for example for oxygen transport. Iron as a food additive is used in flour. Then calcium carbonates are needed for the human body healthy bones, muscles, nervous system, and heart. calcium carbonates as a food additive is used in cereals and soy milk.

On the other hand, Sulfites are used to make the food last longer, it is bad because it can cause allergic reactions in people that are susceptible. BHA also makes food last longer, it is bad because it can cause cancer. MSG is used as flavor enhancer, it is bad because can, among others, cause high blood pressure.

Furthermore, when do they have effect. It always depends on the dose of food additives, if it has an effect on your body. The institution Food and Drug Administration (FDA) federal agency of the United States Department of Health and Human Services, one of the United States federal executive departments. The FDA is responsible for protecting and promoting public health through the control and supervision of food safety, tobacco products, dietary supplements, prescription and over-the-counter pharmaceutical drugs (medications), vaccines, biopharmaceuticals, blood transfusions, medical devices, electromagnetic radiation emitting devices (ERED), cosmetics, animal foods & feed and veterinary products. They also regulate the amount of food additives that are allowed to be used in the products.

II

We know now that most food additives are not good for human body. So we have to find alternatives. In this essay i will provide three solution using alternative additives, avoiding additives, and recognizing labels. According to FDA, FDA is finding out more and more about what's in the foods we eat. it's not all good news. However, some companies are taking the initiative to replace synthetic additives that customers object to with more natural ones.

If you cook yourself, you can remove food additive yourself. Then organic foods often have more beneficial nutrients, such as antioxidants, than their conventionally grown counterparts and people with allergies to foods, chemicals, or preservatives often find their symptoms lessen or go away when they eat only organic foods. Also Organic farming is better for the environment. Organic farming practices reduce pollution, conserve water, reduce soil erosion, increase soil fertility, and use less energy. Farming without pesticides is also better for nearby birds and animals as well as people who live close to farms. so It is good for environment and our body.

Finally I have to talk about how to recognize food additives on labels. For example, If you look Additive names is green pigment, amino, acid Fat, Code numbers is 140, 234, 322 Scientific name is Chlorophyll,

Nisin, Lecithin. I thought a lot of people would know them. When it comes to recognizing labels education at a young age is important. We must understand what the labels mean in order to stand what the labels mean in order to be sure of what we are eating or drinking.

III

In conclusion, you can say that there is an equal amount of positive effects and negative effect caused by food additives. I think on one hand, food additives can be very useful and on the other hand, it can also be dangerous for the human body. Still, we should find an alternative. I think that It cannot be improved immediately. It takes a long time. and The food additives are used for food mostly. The food additives are indispensable to our life. I think If food additives disappear, a supply of the food decreases sharply, and the food poisoning increases, and the price of food rises, and the disposal products increase and shorten the expiration date, and food safety characteristics are lost adversely because the preservation characteristics decrease. Companies will go out of business, and economy of the world declines, and life becomes difficult. It is hard to avoid food additives when you buy food because the scientific names are hard to understand for us. The best way to avoid it is to grow food yourself. I think on one hand, food additives may be useful in some situations but to have a healthy diet, natural food sources would be the better choice.

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Income Inequality in the Philippines

Mao Sada

Poverty and inequality are serious problems in the Philippines. This inequality can trace its roots back to the colonial period when the Philippines was a colony of Spain for over three centuries. In 1898 Spain was defeated in the war with the United States, this change in ruler did not change the opportunity of the people of the Philippines, inequality continued between the ruling class and those they ruled. After that, the Philippines was a territory of the United States until it was occupied by Japan in 1942. Finally, the Treaty of Manila in 1946 finally established an independent Philippine Republic. However, the colonial rule suffered by the Philippines created an entrenched social inequality that has lasted until today. I visited Manila, the Philippines from July 31 to August 6 and actually saw many problems. Then, I was particularly concerned about income poverty. While I was staying in the Philippines, I spent most of my time with students of Saint Pedro Poveda College, and they were especially wealthy children. On the other hand, a lot of people of the less wealthy households I visited in the trip lived in the environment in which the living standards were low. I thought that the wealth disparity such as the gap between students of Saint Pedro Poveda College and people I saw in the poorer areas, was caused by income difference in each household. Therefore, I focused on the income inequality in the Philippines. In this thesis, I will explain main 3 problems, causes and solutions.

I

One of the serious components of the Philippines' income poverty is that farmers and fishermen cannot get a higher income even though agriculture and fisheries account for approximately 10% of Filipino GDP. According to the latest report today on the country's official poverty statistics for the basic sectors for 2015 released by the Philippine Statistics Authority (PSA), farmers, fishermen and children belonging to families whose income is lower than the official poverty threshold, marked the highest poverty incidence in 2015 at 34.3%, 34.0% and 31.4%, within 9 sectors. Additionally, they registered as the three sectors which posted the highest poverty incidence in 2006, 2009 and 2012 as well.

The out-of-school children and youth is also a problem caused by income poverty in the Philippines. According to the Annual Poverty Indicators Survey in 2016, about 10% of the estimated 39 million Filipinos whose ages are 6 to 24 years old were out-of-school children and youth (OSCY). Moreover, 87.3% were 16 to 24 years old, 7.7% were 12 to 15 years old and 5.0% were 6 to 11 years old within 3.8 million OSCYs. Surprisingly, the rate was higher among females than males. The main reasons why OSCY do not attend school are marriage or family matters (42.3%), high cost of education or financial concerns (20.2%), and a lack of personal interest (19.7%). Also, 59.3% of the females do not attend school because of marriage or family matters, and 36.5% of the men do not because they have shown a lack of personal interest.

Unemployment is also an issue of income poverty in the Philippines. According to the latest data from the PSA, there were 145,000 more unemployed Filipinos in 2017 at 2,185,000, then the previous year's 2,040,000. In addition, most unemployed Filipinos are males who just graduated from junior high school and were between 15 and 24 years old. PSA data showed that there are still more Filipino males who do not have jobs than females. Approximately 1.4 million of unemployed people are males and 783,000 are females.

II

One of the causes of the Philippines income poverty is the quick and disproportionate growth of the economy. The reason why the Philippine has been slow to reduce the poverty rate compared to other Asian countries, is that they have not been able to generate employment among the poor people despite the rapid growth of the economy. The GDP of the Philippines had grown 5 to 6% from 1960s to 1970s, but it fell down to around 2% from the 1980s to the mid 1990s. Although it has returned to a gradual expansion trend of around 5% these days, the average GDP growth rate from 2001s to 2007s remains the lowest out of all ASEAN countries.

The type of economic growth in the Philippines is also not appropriate. Recent economic growth is limited to several fields such as export oriented semiconductor industry, telecommunications, business process outsourcing, real estate, housing and retailing. Most of them are in the service sectors supported by the money which overseas Filipino workers send to their families in the Philippines who are operating small businesses. Even in areas such as agriculture, manufacturing, and industry that are supposed to create more employment, performance is not good. The economy is more diversified, requiring a source of economic growth that supports higher levels of expansion and quality employment. Therefore, changes in poverty depend not only on economic growth but also on the type of growth.

High inflation has further weakened the positive impact of economic growth on poverty. Hyun H. Son (Principal Evaluation Specialist, Independent Evaluation Department, ADB) estimated the price elasticity of poverty by products in the Philippines, and predicted that a 10% rise in food prices would create 2.3 million people in poverty, a rise of 10% in non-food prices would generate 1.7 million people in poverty. If the price of rice rises by 10%, the poor people will increase to 700,000 and the poverty population will increase by 20,000 if the fuel price rises by 10%. Son argues that the inflation rate faced by the poor is 0.2% higher than the official discount rate using the substitution price index. This discrepancy further compounds the issue facing those in lower economic groups.

III

As one of the solutions, it is important to raise educational attainment. According to the report released by Asian Development Bank, the landlords of two out of three poor households in the Philippines have only reached less than primary education. The education cannot be taken for free in the Philippines, so most children rarely get an education. In addition, a survey implemented in 2008 showed that three-quarters of Filipino adults (76%) answered that they understood spoken English. Despite the majority of Filipino can use English, there were many people who speak only Tagalog as their mother tongue when I visited the poor areas of the Philippines. Therefore, it is necessary to ensure that all children have access to a full education just like any other developed country.

Population management is also important to reduce income poverty. According to the report released by Asian Development Bank, poor people usually have a large family including six or more members. They might be able to give a child an education if they have only one child. However, parents have to spend much more money on education when they have five or six children, and most of children cannot afford to get it. Moreover, the amount of savings also decreases as the number of the children increases. Therefore, managing the population depends on the level of poverty, and leads to the mitigation of income poverty.

Lowering the tax rate is also a good way to reduce income poverty. High income taxes can prevent more products and employees from working more hours. Thus, a reasonable tax system ensures that the income tax rate is not too high to hinder economic activity. However, the Philippines has the highest corporate income tax at 30% compared to major ASEAN countries. It reduces foreign investors who prefer to do business in low taxed neighboring countries. Meanwhile, the maximum personal income tax rate of 32% is not the highest compared to Vietnam and Thailand, but it is still too high when considered that the government takes 32 pesos for every 100 pesos earned by workers. Therefore, the Filipino government should reduce the tax rate. The best solution to lower the high tax rate is raising the tax base or the number of taxed products and services. The government can collect the same amount of tax or higher than before by imposing a low tax on more goods and services.

IV

In conclusion, I have written about the three main problems, causes and provided solutions to income poverty in the Philippines. The first issue is that farmers and fishermen who support about 10% of Filipino GDP posted the highest poverty incidence among 9 sectors. Additionally, there are a lot of out-of-school children and youth because of the income poverty, and an unemployment is also one of the issues. These problems were caused by the rapid economic growth, inadequate type of economic growth and high inflation. Then, I suggested three solutions including raising educational attainment, populational management and lowering the tax. Education is essential to train experts or workers who have knowledge about technologies or techniques to support the Philippines economy and industry. Furthermore, managing population is important although it could be similar to the one-child policy of China. I think that there is no single solution for solving the disparity in wealth that exists in the Philippines. I believe that a multifaceted approach is essential, It is necessary for poor people to understand that the number of children they can take care of should be limited according to a degree of their poverty. Furthermore, I believe that the government can collect money lowering the impact on poverty by adding more taxed products and services instead of raising income tax. If these are implemented we can reduce the inequality in wealth. However, I believe that any positive effects of these changes will take a long time to be evident.

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Prevailing Against Cosmetics Fuu Naito

Cosmetics are substances or products used to enhance or alter the appearance of the face or fragrance and texture of the body to make you look more attractive and beautiful. Many cosmetics are designed for use of applying to the face, hair, and body. Beauty is subjective. Beauty has been defined in so many ways. The ideals of beauty are branded and solid to people. Some websites explain that "beauty is a property or characteristic of an animal, idea, object, person or place that provides a perceptual experience of pleasure or satisfaction". Beauty is studied as part of aesthetics, culture, social psychology, philosophy and sociology. The purpose of this thesis is to prevail my business plan to help people in need by making fair trade cosmetics products and also making people who has never worn any makeup more beautiful. Fair trade is said to be the most effective way to help hard working farmers in developing countries. According to the fair trade organization, more than 1.65 million people in 75 countries has certified as official fair trade farmers and workers so far. In addition, Sustainable Agricultural and Rural Development initiative says that about 60% of agricultural workers live in poverty and less than 20% have access to basic social security. They also figured out that about 130 million children between the ages of 5 to 17 are working due to the poor economic reasons. In order to help farmers who cannot maintain their livelihood for having low wage, one of the most effective ways to help them is to buy fair trade items to get them proper amount of wage. Today, there are a lot of food products which can be made into organic beauty products such as body lotion, face mask, body soap, and shampoo. According to the article "THE BEST ORGANIC SKIN CARE", the best benefit of using organic beauty product is that they are not harmful for your skin. Normal beauty products contain dangerous chemicals, known irritants, and unnecessary fillers. However, organic ones don't contain these any chemical substances. From these informations, I decided to make a business plan to make organic cosmetic products from food in order to help people who are suffering from hunger and poverty.

I

One of the biggest effects of fair trade items is that hard working farmers in developing countries are able to get stable salary without suffering from poverty. According to the website of Canada fair trade organizations, farmers who are overworking are able to maintain their successful livelihoods through fair trade because it can give them facilitating links to international market. Basically, producers who are in developing countries get just a few amount of salary because of unfair transactions however, fair trade is 50% owned by farmers, therefore, people who work through the fair trade organization are able to get better salary than the people who don't belong to it. In addition, there is a principal by fair trade organization that working conditions must be equal for all workers and salaries should be equal or higher than the average in that developing area. Most of fair trade items have minimum price which is the minimum payment must be paid to the farmers. This is determined by the Fair trade standards and Pricing Unit, therefore, this is going to be fair to every farmers. These principles are going to give significant benefits for farmers in developing countries and they are able to improve their quality of life.

The second major benefit of fair trade is that it is safe for human's body and environment. According to the fair trade Canada, the organization of fair trade has been donating money for tackling climate change to support serious environmental problem. By buying the products of fair trade items, we are able to contribute global issues not only for helping poor farmers. In addition to that, fair trade focuses on improving access to agricultural services such as organic training. Organic Training is the national organic program which provides many kinds of training resources for producers and organic certifiers. The genetically modified organisms are never allowed to use in fair trade items, water is used as sparingly as possible, safe use of pesticide, and maintenance of soil fertility and water resources. We can have fair trade items safely thanks to the fair trade organization having set of many principals. As a result of that, the website which is called Triple Pundit says that over half which is 62% of all fair trade imported items into the US are organic.

Finally, the improvement of economy due to strengthening direct partnership between buyers and producers through fair trade. According to the website of fair trade International, fair trade has a good program which is called fair trade premium. In this program, there is an additional sum of money for the product and this fund is for improving the situation of workers, farmer and local communities in health and education. It is up to farmers and workers how to use fair trade premium. By setting fair trade premium, they can develop their area by themselves by building institutions such as hospitals or school. This program give a lot of good effects on economy. Also, fair trade require buyers to give pre-financing, if producers want them to do it. The reason why this is required is because pre-financing can help for accessing capital so that they are able to overcome the problem which can be the biggest obstacles to their development. This system can assist the economic development of entire rural communities. In addition, farmers never

work alone, they are members of cooperative and organize democracy. Their strong partnership can lead to know the true value of the price of their products which makes easier to negotiate prices.

II

Taking coconut oil for your skin and hair is becoming common recently. Supermodel Miranda Kerr says eating coconut oil is her beauty secret and she has been consuming it since she was 4. The biggest benefits of using coconut oil is to protect hair against damage, moisturize skin and function as sunscreen. A lot of people are using coconut oil for being more beautiful because it can improve the appearance their skin and hair. Coconut oil also shows effectiveness as well as sunscreen, blocking 20% of the sun's ultraviolet rays. The coconut oil is a tropical species and its production is mainly concentrated on island and coastal areas. According to the article "The Top 5 Coconut Producing Countries" done by FAOSTAT in 2016, Indonesia produced the biggest amount of coconut which was at 35.8% of world total. However, according to world bank, more than 28 million Indonesian still live below the poverty line which is \$1.90 a day out of a population of 252 million people.

Avocado is well known as a good food product for your hair and skin moisturizing. Avocado treats skin condition. It contains a lot of fats which are really good for skin and the oils of avocado are very matched to the natural oils in your skin. It can be facial moisturizer and body lotion. Avocados are summer fruits which are only grown in subtropical or tropical climates. According to the ECONOMICS, the biggest producing country is Mexico in the world, which produces 1.52 million metric tons every year. The percentage of people in poverty has been increasing significantly since 2006 in Mexico, when 42% of Mexicans lived below poverty line. About 25 million make less than \$14 a day and a quarter of the them don't even have a job. There is a big wealth inequality between rural area and urban area in Mexico. The average salary in rural area is 4 times less than urban areas.

Shea butter is getting used by more people due to having a lot of vitamin A which is important for improving a number of skins conditions, including blemishes, wrinkles, eczema, and dermatitis. Shea butter is really effective for smoothing skin due to having natural collagen production, oleic, stearic, palmitic and linoleic acids that protect and nourish the skin to prevent from drying. The shea nut is mainly grown in the grasslands of west and central Africa. Shea butter is a fat extracted from the nut of the African shea tree. According to the UNDP, the top shea nut producing country is Nigeria. Nigeria is said to be one of the poorest country in the world. According to the report done by world bank in 2016, poverty still remains at 33.1% in Africa's biggest economy. Over 100 million Nigerians live with less than a \$1 a day.

III

One of the most effective ways to spread fair trade item is to increase the percentage of recognition of fair trade. According to the article done by "Fair Trade Japan" said that Japan is in the worst place of having the number of people who know about fair trade which was at 29.3% in 2012. To increase the percentage of recognition of fair trade, we should make some advertisements to make people know more about fair trade. We don't usually get to see advertisement about fair trade therefore, making a TV commercial about fair trade items would help for increasing the percentage of recognition because people answered the question "Do you start thinking buying the new products on the TV commercial, and 53% of Japanese people said "yes".

Educating benefits of buying fair trade item is also a effective way to make people more interested in fair trade item. According to the research done by the university of Aichi, they announced that when they asked people a question " if you actually know the benefits of buying fair trade product, would you buy that?" and 73% of university students answered "yes". From this consequence, Japanese ministry of education should compel all of educational institution in Japan to teach students how much important fair trade industry is and buying fair trade item actually help people in need. By taking that educational program, students will be more interested in getting fair trade items.

Importing more and more fair trade item would also be a good idea to let people buy fair trade items. Japanese company called goo research said that the reason why people who know about fair trade don't buy fair trade is because they don't get to see fair trade products so often in stores. The thinkable reason why people normally don't get to see fair trade item is because Japan doesn't have a lot of big groceries stores which can afford putting various fair trade items such as Costco and Walmart as much as North America does. To solve this problem, we can even put fair trade items more familiar shops or stores such as cafeterias in school or popup stores.

IV

In conclusion, I discussed three major benefits of buying fair trade items in the first paragraph in order to determine which one has the biggest benefit. All three of them have significant good effects on hardworking farmers in developing countries. When taking everything into consideration, I think that being able get stable salary is the biggest benefit. The reason for that is as hard-working workers get proper amount of salary, they and their families

will be able to maintain their livelihood and they don't have to work as hard as they used to. I think that this is the biggest point because they will be financially comfortable to do some required things. For example, the children of farmers will be able to go to school and take proper education. It will give a big effect on developing countries to improve the situation of poverty and hard working. I focused on three food products which can be made into organic beauty products and they are grown in developing countries. As I mentioned above, coconut oil, avocado, and shea butter have a lot of benefits to use and we can help people in need by making beauty products in those area. I discussed how to prevail my business plan in the third paragraph, I think that the first step for promoting fair trade item in Japan is to teach what fair trade is to students at school. The reason why I think that is the best idea is because people wouldn't even consider to buy fair trade items even if they get to see them at the stores if they don't know what that is. Advertising fair trade item would also be a good idea, however, it costs a lot of money to be on TV commercial and we may not get much profit from that. From these reasons, Japanese ministry of education should work on compelling all of educational institutions to teach about fair trade.

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The Decrease of Food Self-Sufficiency Rate in Japan

Chinatsu Nishimura

Food is indispensable for maintaining human life and is important as a basis for a healthy and fulfilling life. Declining food self-sufficiency rate is one of the most serious food problems in Japan. Total food self-sufficiency ratio on a calorie supply basis declined from 49% to 40% between 1989 and 1998 as reported by MAFF. For the next 20 years, the food self-sufficiency rate has hardly changed. However, it declined to 38% in 2016, and it was the second lowest figure since 1989. Also, the annual consumption of rice per person was 126.2 kg in 1960, but it decreased to 67.4 kg in 2006 as reported by Ministry of Agriculture, Forestry and Fisheries. Japanese meal style has been changing. Food self-sufficiency rate is important because we will have various influences on not only Japan but the whole planet if these things continue. While the world's supply and demand of food is expected to be tight in the medium to long term, many people have anxiety about the future. According to the Japan Times, the government of Japan aims to raise food self-sufficiency rate to 45% during 2025. In this thesis, I will look at the causes, effects, and solutions to determine the importance of food self-sufficiency rate in Japan.

I

One of the major causes of food self-sufficiency rate decrease in Japan is the change in dietary habits of people in the postwar period. In Japan, the Westernization of food has been advancing. The modern Japanese healthy diet is not be able to be maintained without the import of large amounts of food from foreign countries. Demand for meat is increasing because of the Westernization of dietary habits, and consumption of rice with high levels of self-sufficiency is surely going down. According to the Japan Times, the annual rice consumption per capita declined 0.2 kg to 54.4 kg, that was less than half of consumption 50 years ago. On the other hand, meat consumption had an increase 0.9 kg to 31.6 kg. While the appetite of imported food has been increasing, consumption of domestically produced food has decreased as reported by the Japan for Sustainability. For example, consumption of meat and edible oil has tripled, and even quadrupled since 1960, however rice consumption has almost halved. Japan continues to rely on import from overseas. Only 10% to 20% are self-sufficient in the production of wheat and soba buckwheat necessary to make bread and noodles.

The second cause is inclement weather or natural disasters. The number of natural disasters such as drought and flood caused by extreme weather phenomena with direct influence is increasing. If such things continue, the growth of agricultural crops will be worse, and become poor harvest. According to the Ministry of Agriculture, the food self-sufficiency rate of rice in 2016 which ended in March was low on a calorie basis for the first time in 23 years. The self-sufficiency rate fell by 1 point from the previous survey to 38%. This is the second lowest score after recording the 37% in 1993 when rice was in serious trouble due to unstable weather. Wheat production in Hokkaido decreased due to typhoon as reported by the Japan Times. Calorie-based food self-sufficiency rate was 39% until the previous fiscal year. It was lower than the previous year for the first time in 6 years. In the summer of 2014, bad weather nationwide led to poor growth of soybeans during the period of ripeness. The production volume of soybeans reached 200,000 tons that decreased 15.3% from the previous year as reported by the Japan Agricultural News.

The third background is the decrease in agricultural workers. The population engaged in agriculture sharply declined. According to the Facts and Details, there were about 11.8 million agricultural workers in 1960, but the population has decreased to about 1.9 million in 2009. Originally, the farm area is very small. While today in Japan more than 10 ha is said to be the best agricultural land size for full-time agriculture, but only 0.7% of Japanese farmers have land the size. Approximately 92% of the farmers have less than 3 hectares of farmland. This has not changed much since the land reform in 1947. Most farmers already have retirement ages aged 65 or over, and few successors. This is because there are an increasing number of young people going out to urban areas for stable earnings. The aging population of agriculture is progressing. According to the Ministry of Agriculture, the average age of agriculture and forestry in Japan reached 65.8 years in 2010, exceeding the age of 65 for the first time. Two thirds of Japan's 3.12 million farmers were over the age of 60, and 50% were over the age of 65.

II

The first main impact is deterioration of health. According to the Japan Times, demand for meat has been increasing due to Westernization of dietary life, consumption of rice with a high self-sufficiency rate has been declining steadily. To put it another way, people in Japan has been getting away from healthy Japanese food mainly of rice, fish and vegetables, and eating more unhealthy dishes using meat and oil has been increasing. The rapid rise in the obesity population in Japan has been a problem. According to data from the Asia Pacific Journal of Clinical Nutrition, twenty percent of Japanese people were obesity and the Japanese obese population tripled from 1962 to 2002. Lifestyle-related diseases due to obesity have been increasing. Obesity is the most important factor leading to

diabetes and metabolic syndrome which is a group of risk factors that increase the risk of coronary artery disease, stroke, type 2 diabetes, and in recent years the prevalence of diabetes is rapidly rising in Japan. Safety of imported products is concerned. In 2015, there was a big news that Shanghai company provided rotten meat in Japanese fast food main chain such as McDonald's and Family Mart. There were problems such as unsanitary environment and expiration date.

The second main effect is the strong influences from overseas. Japan relies on a small number of countries for the majority of imports. It is susceptible to the influence of the partner country, so the supply base for food is weak. In recent years, the rise in food prices has become a problem. Food prices rose by 2.4% in 2014. The prices of certain kinds of food rose due to the weather. As mentioned in the first effect, problems on food in China have been reported, but still Japan can not stop importing. China is not only the world's largest agricultural economy, it is also the largest agricultural exporter. In addition, China's labor costs are cheap, and items made in China are offered at a low price. In Japan, many imported items are cheaper than domestic products. For example, in supermarkets, the quality of food is better than that of foreign countries, but most people decide to buy at a price.

The third major influence is the increase in environmental load. In Japan, it is a problem that big food mileage is large. Food mileage is a quantitative indicator that can provide hints on transport-based food supply structure. The remarkably high food mileage in Japan is largely caused by particular commodities like grains and distant export countries such as the United States, and incurs environmental concerns. According to Cahiers d'histoire géo, Japan's food mileage is very high compared with other countries. It is about three times that of Korea and the United States, about 5 times of Britain and Germany, about 9 times of France. The larger the value of food mileage, the bigger the carbon dioxide emissions. In other words, it is one of the reasons for promoting global warming. The lower the food self-sufficiency rate, the more reliance on imports in Japan. It means that Japan's food mileage continues to increase and burdens the environment.

III

There is an importance of review the diet of people. People should refrain from meat and oil, and try to eat mainly rice and vegetables. Too much intake of meat and oil causes various lifestyle diseases. It is important to keep a balanced diet with plenty of vegetables, mainly of rice, like the old days. Dining with local ingredients can also help raise food self-sufficiency rate in Japan. On the land where we live, agricultural products suitable for that climate and the environment are brought up. Agricultural products harvested nearby are more fresh than others. Choosing locally harvested ingredients for each person will support regional agriculture. People ought to use seasonal ingredients just right for that season. "Season" agricultural products are made reasonably at the most suitable time, and do not require extra labor and fuel. They are good in taste, plenty of nutrition, people can realize a meal that is friendly to the body and the environment. People need to be conscious of reducing leftovers. In Japan today, food leftovers are very large. It is a problem to import a large amount of food and throw it out in large quantities and it is necessary to improve even environmental problems. Reducing unnecessary consumption of food leads to reducing the need for food imports.

Secondly, it is significant to emphasize the efforts of producers. Farmers should make effective use of limited agricultural resources. Japan has only about 30% of flatlands, so it is difficult to raise the food self-sufficiency rate to 100% even if converting it all into farmland. Therefore, it is necessary to prevent further reduction of farmland. Farmers are required to provide safe and high-quality agricultural products. Fresh, delicious and safe agricultural products can give consideration to the environment and health, and enrich the diet of the people. It is necessary to solve the problem of successor shortage. According to USDA, in 2010, young farmers under 39 years old accounted for only 4.7%. In 2013, more than 61% of Japanese farmers were 65 years old, in some prefectures the average age of farmers is 70 years as reported by MAFF. In addition, the government should solve the problem of income disparity of farmers. Only agricultural income is relatively lower than salary of non-agricultural sector, so there is a possibility that many young people in Japan will deviate from agricultural career. According to MAFF, the average income per household of farmers was 4.63 million yen in 2011. This was less than 1 million yen lower than the average income per household.

Finally, it is important to transmit information in an easy-to-understand manner. Food businesses should provide domestic foods and display them clearly. For example, in a supermarket, it is necessary to clarify where carrots were harvested in Japan. Providing menus using local fresh ingredients at restaurants and cafeterias can also help raise Japanese food self-sufficiency rate. For instance, the menu is required to show domestic ingredients and vegetables taken in the area in an easy-to-understand manner. It is necessary to incorporate more food self-sufficiency rate into school education. From my elementary school experience, I visited local farmers and got direct coverage, and the menu of school lunch was written that local ingredients were used. In addition to learning from textbooks, I had opportunities to know and experience local crops directly. People can promote understanding of agriculture and agricultural machinery through nearby farm work experience. For example, if they participate in a rice planting event,

they are able to learn about the pleasure and difficulty of experiencing and growing rice until you can make rice through bucket rice cropping.

IV

In this thesis I am looking at the causes, effects, and solutions of food self-sufficiency rate in Japan to better understand the topic but to also look at how we can solve the problem. I think that it is impossible at the present moment to increase the food self-sufficiency rate in Japan significantly. In the first place, the agricultural land that Japan has is small, and the decrease in the number of agricultural workers due to aging population with a declining birthrate is remarkable. In addition, Japanese citizens need to think about local food production and consumption in order to raise food self-sufficiency rate. Japanese government should pay more attention to this problem. In order to make a living by agriculture, farmer's income will need to be increased. If this problem is not solved, Japanese people will not be able to live without food imports in the future. I believe that knowing the problems leads to improvement of food self-sufficiency rate. If people do not know about the problem of food self-sufficiency decline, there is not any change. There are many things we can do to raise food self-sufficiency rate. We need to create opportunities for ourselves to experience it and deepen our understanding, and there are things we can do in our daily lives. I anticipate that efforts to increase the consumption of domestic agricultural products aiming to improve Japan's food self-sufficiency rate will increase in the future. However, I think it is difficult to stop the influences I mentioned. I feel that every Japanese citizen needs to be conscious of it. If the government does not move, the people will not move either. If the government spread the movement to advance local food production and consumption more, it will be possible to reduce the purchase of imported goods.

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Congo Sapeurs
Anna Matsuoka

The Congo was once colonized by Belgium. The colonial rule period was November 15, 1908 when King Belgian Leopold II gave the Belgian Government the control of its Congo Free Country to June 30, 1960 when Democratic Republic of Congo Independent. It became private property of King Belgian Leopold II, and Belgium robbed Congo's special products such as rubber, ivory and land. After that, independence movements began just like other African countries, in 1960 Congo became independent country. However, five years of confusion continued from the separation movement in the southern part of Katanga province. This conflict was caused by Belgium that have allowed independence. Separate the state of Katanga which is a rich mine area in the south and Belgium wanted get most of the product. And the civil war began to start because of Belgium. And civil war is still continuing.

I

Every person thinks that people who are in poor countries are not happy. But I think people in poor countries are happy too. Moreover I think the people in poor countries are happier than rich people. According to the United Nations World Food Programme, Congo which stands for the Democratic Republic of the Congo is one of the most dangerous and poorest countries in the world. It is the second largest country in Africa. The largest country in Africa is Algeria. In this chapter, I will explain why I think poor people are happier than rich people, with a focus to Congo with Congos good points and bad points to determine how Congos peoples life.

Everyone thinks that poor countries have any good point, but it is wrong. Most of the natural resources are coming from the poor country. In Congo, there are a lot of good resources. Congo is blessed with natural resources especially blessed with metal resources. Some people say that the scale of reserves such as diamonds, gold, cobalt, copper, tin, and tantalum is hundreds of trillion yen to thousands trillion yen! And also it owns 60 to 80% of the world's leading extremely demanding Coltan. Caltan is the resource use for the phone, a game machine (DS, PSP and more), and Personal computer. With the resources of this country, we can use this equipment at a cheap price in the world. While Congo has a lot of resources it is in categorized as a poor country. It because there is a lot of bad points that to the country makes poor too. Congo is the poorest country and one of the dangerous country in the world. Everyone thinks that there is a lot of money in the country because of the natural resources and they use every people all around the world. From research one of the main causes of poverty in the Democratic Republic of Congo is health threats, especially malaria epidemics, and in 2009 about 6.7 million cases occurred nationwide. Infectious diseases such as malaria divert economic investment intention and contribute to child mortality rate. However, health risks are not the only remarkable source of poverty in the Democratic Republic of the Congo. It is estimated that the number of orphans, whose population is increasing, not only due to illness but also intense conflict in the area is about 4 million people and estimates of the number of people who died during a long dispute are around 900,000 to 540,000. And the civil war is still continuing.

However, the Congo is said that it is a fashionable country in the fashion industry. Many people think that London, New York or Italy. But not! "SAPEURS" do you know this name that is in the limelight from the world fashion industry? Republic of Congo located in central Africa. The Bacongo area on the outskirts of the capital city of Brazzaville is recognized as a place to enjoy SAPE. SAPE is stand for " Société des ambianceurs et des personnes élégantes " in French. It's mean Fashionable and elegant gentlemen's association in English. Most of the people in the Bakongo area live while raising agricultural and livestock products such as sugarcane, palm oil, wood, livestock, etc. The monthly salary is about 300 dollars. They are wearing only high brands such as Prada, Kenzo, Yohji Yamamoto. In short, they are spending months of salary and enjoying fashion. Why they don't stop fashion even if they are poor is because their belief is "To abandon weapons and live elegantly". Origin of this creed is about 90 years ago, although there are various opinions about origins, there is "Catholic faith" as the main premise for understanding the Sapeurs. They abandoned their weapons and wished for peace by fashion. Paul Smith liked their style and in 2015 "Paul Smith" actually announced a collection inspired by a Sapeurs. And they are attracting attention as a symbol of peace in the world.

II

Not many people know the existence of Sapeur. Congo is a country with almost the same area as Japan. The average monthly salary of the people is 25,000 yen on average, 30% of the living expenses is 130 yen or less but there is the people call Sapeur who is wearing expensive brand clothes. In this essay, I will discuss three problems why there are people like Sapeur are in a poor country like Congo, in order to know what are they affecting in their country.

First, what Sapeur is. SAPEUR omits the French initials meaning "Fashionable and Elegant Gentleman's Association" (Société Des Ambianceurset des Personnes Élégantes). And that fashion is also called SAPE. Sapeurs is a new word created by Congolese diaspora youths, especially Paris and Brussels, living in large Western cities, certifying and validating the quest for new social identity through fashion. According to Spanish photographer Hector Mediavilla says "At the beginning of the 20th century, when the French arrived in Congo, the myth of the Parisian elegance was born among the youth of the Bakongo ethnic group". When searching for the roots of SAPEUR, it dates back to the colonial era which was ruled by France since 1884. Congo people met French elegant fashion style and tried to imitate that style from the admiration for the West. With the turmoil after independence in 1960, the culture of SAPEUR came to stagnate. However, as charismatic singer Papa Wemba appeared in Kinshasa, the capital of the Democratic Republic of Congo in 1976, it is said that the culture of Sapeur has become fully established. After that, SAPEUR lowered the philosophy of "to abandon weapons and live elegantly" into the fashion in the confusion caused by the long-lasting civil war. Currently it has become a manifestation of nonviolence and peace, and it was recognized by the Minister of the Congolese government as well. They are looked up to as a hero to the children of the city and the common people.

Next, there is a big relation between war and Sapeur. In the Democratic Republic of Congo, which boasts the second largest land area in Africa and the total population (approximately 70 million), this has been a long civil war situation. The cause of the conflict is abundant mineral resources such as diamond and cobalt which are mined in the eastern part of the country. The Democratic Republic of Congo is the world's leading mineral resource power. Cobalt is said to be in Congo 65% of the world. Among them, we are fighting the conflict in the Democratic Republic of Congo and foreign countries, surrounding the interests of "rare metal" used for smartphones and electronic devices, which are supposed to start the iPhone in particular. As a result, it is said that about 5 million people have lost their lives. Economic development is proceeding around the capital Kinshasa where the SAPEUR exist. On the other hand, conflicts still continue in the eastern areas where resources are sleeping and there are a lot of people who have had a hard time of the Congo's civil war because of the natural resources. Some of the Sapeurs members have experienced a civil war and experienced themselves with fear and sadness of war and although it is still a poor country, the lives of SAPEUR who have passion and pride in being elegant should surely lead to the bright future of the Congo.

Finally, where is the Sapeurs fashion came from, some people say that Sapeurs fashion is not from France. Before the settlers arrived, the Congolese people were already conscious of fashion, and they were already stylishly wearing clothes. Later, when the settlers came and brought their clothes, we threw away their old clothes, began to wear what they were handed in and brought to them, It matched the sense. That the why people says that France is the fashion role of Sapeur. One of the Sapeur said "We had their own taste and aesthetic sense before they came. I was already interested in Sap". What is important to us is color. Even looking at nature, for example, which do you think is beautiful crow or parrot? It is definitely a parrot. The crow is black and white, but the parrot is beautiful with feathers of various colors, isn't it? Color is very important for us. Black and white are generally ceremonies or colors when mourning. Therefore, I like the one with color. " So the Sapeurs fashion is colorful. Another Sapeur said, " You cannot always choose what you do, but you can always choose who you are". That why they are enjoying fashion even if the cloth is very expensive. If you are rich, you can buy as many things as you want without thinking about anything. However, the Sarpur members live far from being rich. I think that the joy of having such a fashionable high price suit holding such a thing is very big and exciting thankful happen for them.

III

I think every people know the Paul Smith. He is the world famous fashion designer from England. The famous designer Paul Smith got the inspiration from the Sapeurs fashion and life. In Japan, Sapeurs was introduced by a program of NHK and was paid much attention in 2014, And the exhibition of pictures of SAPURU carried out at Shibuya Seibu in March of this year was prosperous. But not many people don't know about them. In this essay, I will write about the father of Sapeurs and why Paul Smith got influence from Sapeurs.

First, I will write about the Sapeurs father. He is also called "The King of Sapeurs". He is the musician. The musician is called Papa Wemba. He is from the Congolese Democratic Republic and he is one of the people who represent the African music in the world. He spread the Congo's music "Wemba Rock" on 1970 in the all around the world. He died at 2016 when he was sixty-six years old at his concert stage. However, he is still worship by Sapeurs he is called "The king of Sapeurs" by them. Why he calls The king of Sapeurs is because he is the man who resurrected the Sapeurs culture. The roots of Sapeurs have existed since the 1920s, but it stopped for a long time, it was the cause by independence and confusion from colonial rule.

His quote is "If I stop fashioning, I am not myself". He wears the brand of clothing like Armani, Charles · Jordan, Yosi · Yamamoto and singing on the stage. And the movement of SUPRE has revived by the people who admired him. Papa Wemba continued to be a Sapeur despite the dictator Mobutu Sese Seko in 1965 forced the people to

"national clothes" to eliminate the influence of the West. Why he does this is because it is the pride and is also a way of life for Sapeurs.

Second, how did Paul Smith find Sapeurs. Paul Smith was shocked when he found how Sapeurs are fashionable. In 2010 at the London collection Paul Smith presented a fashion with a motif of Sapeurs. It is wearing pink suits, red hat and red shoes. And also there are a lot of photographers kept taking pictures of Sapeurs. One of the photographers said "As a habit, photographers respond greedily to new, unknown things and people" and he said it is about "A serious and sincere peace idea and a fashion-oriented unusual money sense". He means they are not wealthy but they use most money into the clothes, this surprises him a lot. He keeps taking pictures of them and he knew why they keep using the money to cloth. Sapeurs are walking in nice clothes and wishing for peace.

In addition, there is a book about Sapeurs fashion named "The Gentlemen of Baongo". This book's pictures are taken in a small suburb of Brazzaville in Congo which has become an unlikely style capital, thanks to its dedicated followers of foppish fashion. In 2009 photo collections that photographed Sapeurs was published in the UK and became a topic among fashionistas around the world. This is the photo book "SAPEURS the Gentlemen of Baongo" was decided to be published in Japan in mid June 2015. An Italian photographer Daniele Tamani posted the snaps taken with the central figure of Sapeurs and interviews with them without compromising. It is also composed of a preface of Paul Smith, a designer who was shocked by their fashion sense. They did not start doing fashion because they wanted to be famous, they just enjoy themselves wearing nice clothes, but they were founded by a big fashionista and became famous.

IV

The existence of Sapeurs are the light to end the Congo dispute. They are the required presence in Congo. They are the people who are hoping the world to be a safe and happy place. Sapeurs attracted attention by Paul Smith and the awareness of Sapeurs increased. Therefore, it became for more people to know the current situation of Congo. And they show that not only rich people, but everyone can enjoy fashion. I think it is approaching the end of the civil war. Rather than feel sorry for the poor country, it is important to know what you can do by knowing the current situation of poor countries. The Congo's people are having fun even they can't earn a lot of money. Everyone has seen the picture of African children sending a big smile. They are happy to have lived and have food, but the rich countries people are thinking that it is normal to get the food every day and they don't be thankful to have food. So the people in poor countries are thankful for everything. They are blessed with feeling than rich people. According to the Annual Global End of Year Survey in 2015 shows that the ranking of the happy countries. The top ten countries are not a rich country which are Colombia, Bhutan, and Saudi Arabia. But Congo is in the worst tenth because of the civil war so we all have to think about how the people in the war can be happy. The only solution is to quit the war. Sapeurs is insuperating a lot to the world. Not only rich people, everyone can enjoy fashion. And they taught us that fashion (hobby) can change the world. They keep changing their country Congo to a better place by enjoying their clothes. Most people think that people in the developing country are pitiful but they are not they are enjoying themselves and they are happy. I thought it is a very great thing.

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How Diseases are Connected to Our Lives

Anna Kimoto

According to WHO, in 2015, top 9 out of 10 causes of death globally were due to diseases. Especially cardiovascular diseases, diabetes, and cancer share a big proportion of the cause of death globally. However, the tendency of what diseases people likely to get can differ depending on which country you live in. This essay will discuss how the tendency of diseases can vary, by picking up two countries; Canada and Japan, and compare how lifestyle, such as food cultures, smoking, lacking of exercise is cranking up the risk of those three kinds of diseases in each country, while explaining the possible solutions to prevent them.

I

First, Cardiovascular diseases is the number one cause of death globally. In fact, about 17.7 million people died from CVDs in 2015, which means, 31% of all global deaths come from cardiovascular. There are two main kinds of Cardiovascular diseases; cerebrovascular disease which means disease of the blood vessels supplying the brain and the other one called ischemic heart disease which means the condition that affects the supply of blood to the heart. According to OECD Health Statistics 2013, 39 out of 100,000 people in Japan, 108 people in Canada had ischemic heart disease respectively. On the other hand, in the same year, 43 out of 100,000 people in Canada, and 61 people in Japan had cerebrovascular disease. The main factors of cardiovascular diseases are Smoking, high levels of certain fats, cholesterol in the blood, high blood pressure, and high levels of sugar in the blood or diabetes. Then, what makes the difference between ischemic heart disease and cerebrovascular can be food differences. Japanese food culture put fish mainly rather than meat, which means people have many opportunities to eat fish more than Westerners. Fish has good quality fat called EPA which prevent ischemic heart disease, however fish leads high blood pressure and brain fragility because of too much salinity and low protein diet. Moreover, Japanese people add Miso, and soy sauce as a spice in many dishes. Therefore, these factors lead higher rate of cerebrovascular diseases. On the other hand, Canadian food style is consisting of high protein high calorie, therefore the food style brings diabetes and hypercholesterolemia, and these factors lead ischemic heart disease. It is said that 80% of the causes are preventable. More than 1 in 10 deaths worldwide from CVD in 2000 were attributed to smoking. In the United States, smoking accounted for 33 percent of all deaths from CVD and 20 percent of deaths from ischemic heart disease in persons older than 35 years of age. Which means, stop smoking could lower the risk of getting cardiovascular diseases remarkably. Another solution is to have diets rich in fruits, vegetables and whole grains. Also, low-fat or fat-free dairy products, lean meats, and fish are part of a healthy diet, while avoiding too much salt and sugars in diet. In fact, people with diets consistent with this dietary pattern had a 31% lower risk of heart disease, and a 20% lower risk of stroke. The last solution for cardiovascular diseases is put moderate aerobic activity for 50 minutes a week in your life at least. Having vigorous aerobic activity for 75 minutes a week or a combination of moderate and vigorous activity is a recommendation to prevent CVD, so that you can keep up the healthy lifestyle.

II

Next, for diabetes, there are two types of diabetes; type 1, and type 2. People with type 1 diabetes don't produce insulin, it occur by genetic problem. However, people with type 2 diabetes which 90% of people with diabetes have, produce insulin, but doesn't make enough insulin, and both types of diabetes can lead to high blood sugar levels. According to OECD, the number of people with diabetes has risen from 108 million in 1980 to 422 million in 2014. In 2015, an estimated 1.6 million people died directly caused by diabetes. Moreover, it is predicted that diabetes will be the seventh leading cause of death in 2030 according to WHO. According to OECD Health at a Glance 2011, about 5.0% of adults from 20 to 79 age had diabetes in Japan, and 9.2% in Canada. As shown, there are almost as twice as many people who have diabetes in Canada. Often, the most involving factor is a family history of type 2 diabetes, and other big causes could be obesity, living a sedentary lifestyle, increasing age, and a bad diet. According to OECD Health Statistics 2017, 3.7% of people in Japan are in obesity and 25.4% people in Canada is in obesity. Which means quarter of people have obesity in Canada. Therefore, one of the reasons that make this big difference is food culture. People in Canada take high protein high calorie more than people do in Japan. These factors can be said to be the causes of diabetes. Some facts such as type 1 diabetes; family history, and age are the causes which are inevitable. However, 80% of the type 2 diabetes, which over 90 % of people have can be prevented. A detailed analysis of 37 studies found that people with the highest intakes of fast-digesting carbs were 40% more likely to develop diabetes than those with the lowest intakes. Besides, those who consumed more than two sugar-sweetened beverages per day had a 20% higher risk of developing type 2 diabetes. Therefore, changing dietary habits to the one stated as a prevention of cardiovascular diseases could be one of the big prevention for diabetes as well. Another study found in that moderate-intensity exercise increased insulin sensitivity by 51% and high-intensity exercise increased it by 85%

for people with prediabetes. Which would help with you to managing blood sugar levels. The last prevention is to quit smoking. In an analysis of several studies investigated by over one million people, smoking issues increase the risk of diabetes by 44% in average smokers and 61% in people who smoked more than 20 cigarettes a day.

III

Lastly, Cancer is the second leading cause of death globally. In fact, in 2015, 8.8 million died by cancer which means, nearly 1 in 6 deaths is due to cancer. Cancer is an unusual growth of cells which tend to increase in an uncontrolled way. According to The state of health atlas written by Diarmuid O' Donovan, prostate cancer is the most common type of cancer for men in Canada and stomach for men in Japan. Following that, For women, breast cancer is the most common in Canada, and colon cancer in Japan. Overall, According to World Cancer Research Fund International, out of 10,000 people, 217.1 have cancers in Japan on average, and 295.7 people have cancers in Canada. The causes of stomach cancer could be smoking heavily, and aging especially age over 50 years old, being men, family history of the disease, and people especially who are Korean or Japanese. As you can see, except smoking, stomach can't be prevented by your lifestyle. Secondary, colon cancer which is common cancer among Japanese women, in most cases, it's not clear what causes colon cancer. Common risk factors for colon cancer can be aging, family history of colorectal cancer, and long-standing ulcerative colitis, As same as stomach cancer, in many cases, you cannot prevent it by changing your lifestyle. On the other hand, prostate cancer for men and breast cancer for women are the most common cancers in Canada. First, to talk about prostate cancer, researchers do not know exactly what causes prostate cancer, but on a basic level, prostate cancer is caused by changes in the DNA of a normal prostate cell. Finally, moving on to breast cancer, as same as other cancers, the exact causes are not known, but it is said that the most significant factors are aging and a family history of breast cancer, and a woman whose mother, sister, or daughter has had breast cancer is two to three times more likely to take after the disease. Moreover, older women likely get breast cancer than younger women do. Overall, what causes cancers are not likely from their lifestyle, but from family history which is genetic things or their age which can't be helped. However, it doesn't mean there's no relationship between the lifestyle. In fact, 40 % of cancers are preventable. For example, about 80% of lung cancers result from cigarette smoking. For breast cancer, moderate to vigorous physical activity leads lower breast cancer risk. A diet that is rich in vegetables, fruit, fish, and low-fat dairy products has also been predicted to have a lower risk of breast cancer in some studies. At the same time, many studies have found that a high intake of fresh fruits and vegetables is linked with a lower risk of stomach cancer. On the other hand, high intake of salt, and possibly processed meat, develop a higher risk of several types of cancers. Besides, another studies have found that men who get regular physical activity have a slightly lower risk of prostate cancer as well.

IV

In conclusion, We discussed how the three main diseases differ in each country; Japan and Canada, while pursuing the cause of how it make those differences and how to solve them . I summarize that Food cultures which state fish culture and meat culture are the biggest cause for Cardiovascular diseases, and that food culture differences can cause the diabetes as well. Not only food issues, but also smoking, lacking of exercise, could higher the risk to get any of those three main diseases. Moreover, inevitable issues such as aging, family history, gender, races shares the main causes especially for cancer, while family history is a huge cause of diabetes at the same time. I believe all diseases are connected to each other, which mean, for example, preventing from getting Cardiovascular diseases lower the risk of having other kinds of diseases such as diabetes. Therefore changing your lifestyle will remarkably save your life from any kinds of diseases. Besides changing your lifestyle, you need to understand your family history and go to see medical examination on a regular basis to see what kind of disease you tend to get, and cure them when it is still in the early stages.

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Food Is Our Life
Akiho Shigeta

The world has a lot of foods. Probably almost all people have not eaten the all other countries food before. why each country have different foods, why our foods are not same. According to the Worldometers, there are 195 countries in the world. These countries have each cuisines, so this mean about 195 kinds of cuisine we have today. These days, Japanese traditional food, which "Washoku" is registered intangible cultural heritage in spite of the almost people do not know the "Washoku". But different food are sometimes similar, so it is kind of connect each state. Do you know our meals and health have relationship. If you eat healthy foods, your body become healthy. If you eat high calorie foods your body become fat and bad. For example, American cuisines which is Hamburger, Hot dogs, pizza and French fries and so on. According to researchers at Oxford and Columbia University (published in the August 2011 issue of The Lancet Medical Journal), if the current obesity trend continues, Half of Americans become obese by 2030. What foods is good for health. I will show you the influence of meals on our bodies. People can feel many kinds of taste such as spicy, sweet, bitter, sour. but now poor people cannot eat enough foods, so they do not know what is spicy foods, sour foods and so on. because, they are eating same cheap food everyday, every time. However we have enough foods which is all of people can eat enough. For example 2.4 billion tons of grain are made. This figure is twice the amount necessary for people around the world to live. but, there are many people suffering. According to Food and Agriculture Organization of the United, 815 million people, 11% of the population cannot eat enough foods. It gradually declined 14.7% from 2014. But, still one in nine people are hungry. Especially, African and Asian area have serious problem of hunger. About fifty thousand people dead per day because of starvation. Among them 70% is children. Hunger is may be caused by many things. In this thesis I intend to look at explain about three reasons why we have a lot of kinds of foods, including Patterns of economic organization, trade and travel, Landforms, terrain and soil, cultures or religions, to compare each countries. I will then look at which country's foods are good for health and why it is good for health. Finally several causes of starvation, including political causes and effects, social causes and effects and economic causes and effects.

I

In this section, I will talk about three reasons why we have many kinds of foods, including Patterns of economic organization, trade and travel, Landforms, terrain and soil, cultures or religions, to compare each countries.

One reason would be Patterns of economic organization, trade and travel differed. Firstly, rice came from china. This meant, from long ago, Japan traded with china and other Asia. Rice has been cultivated for more than 3,000 years in Japan. It is the staple food of more than half of the world's population. About 3.5 billion people depend on rice for more than 20% of their daily calories. Asia accounts for 90% of global rice consumption, and total rice demand there continues to rise so almost Asian countries eat rice. But outside Asia, rice is not a staple. Most Canadians have a wheat-based diet that includes breads and pastas and also America's staple is wheat, corn. Approximately 15% of the world's calorie intake comes from wheat. England, Ireland and Finland's staple food is potato. From these things, Staple foods resemble because of the countries are close.

Second reason would be, Landforms, terrain and soil differ. Japan is surrounded by the ocean. However, the blessed point of Japan is located at warm ocean and cold ocean intersect. And Japan have a lot of rain because of influence of monsoons and typhoons. Because the high mountain covered with tree grass exist in the middle of the terrain, a large amount of water that has soaked into the mountain becomes underwater and it is filtered to create excellent water. This water influences for Japanese foods. For example "Miso soup", "Nimono", "Ohitashi". These things were used a lot of water. A beautiful country of water like japan are Swiss, Norway, Luxembourg. Swiss have Herbs. so they use Herbs for many cuisine. Most popular things which using Herbs is tea. And, Norway and Luxembourg have a lot of Seafoods. For instance, "Smoked Salmon or Røkt Laks" Salmon, "Friture de la Moselle" freshwater fish. From this, if water are flesh and clean, people use water for foods.

Third reason would be, People had ethnic differences and/or developed different cultures or religions. Japan have not specific religions. China, Thailand and Myanmar are Buddhism. These country's cuisine are "Guangdong" and "Tom Yum Goong". These cuisine are not sometimes use meat because Buddhism is not eat meat. so they use seafoods more. The Islam are Pakistan, Indonesia. Islam is not eat pork, drink alcohol. Because they are believe "Biryani and Pulao", "Dhal (Lentil Stew)" and "Sambal". From this, almost all cuisine are not use pork. They use durk, beef, chicken. Conversely, Hinduism are not eat beef. because they believe cow is "Holy one". The country of hinduism is India, Nepal and Bangladesh. The cuisine are "butter chicken", "pulao" use rice chicken. Therefor, each religion and each cuisine have deeply relationships.

II

One of the good foods for body is Mediterranean food. Mediterranean foods are mainly Featuring fresh fruit and vegetables, whole grain cereals, nuts, the odd glass of red wine, fish and dairy, and olive. Many investigation told If people eat together these type of foods, we can get a lot of merit. All of our bodies problems make something better. In addition, chronic symptoms such as heart disease, stroke, type 2 diabetes, dementia are alleviated. The extra virgin olive is increase good cholesterol to protect the heart. Anna Daniels, a spokesperson of the British Dietetic Association told Mediterranean food are most good a dietary cure for in order to heart health and longevity. The extra virgin olive is increase good cholesterol to protect the heart.

Next one is Japanese foods. The Japanese live longer is one of the highest in the world. The average is about 84.47 years old. These days, investigation told good for health are not only certain carbohydrates, vegetables, fruits, but also meals with fish and meat is high. The Japanese government issued recommended food guide in 2005. This book encouraged the people have to eat high-carbohydrate diets get from saturated fats, processed foods, and both rice and vegetables. The researchers discovered that participants who followed the this methods decreased their death rate by 15%. And Japanese people are often consumption tea and water. It is very good because their are not have sugar. And japanese people eat "Washoku" which is low in saturated fats as well as sugar, and Most foods are tailor-made to aid in a smooth digestive process that still provides plenty of energy to get through the day. That's why Japaneses people can live longer.

Last one are Nordic nations including Sweden, Denmark, Norway, Finland and Iceland. Their are commonly eat rye bread, oily fish, local fruits such as rosehip, root vegetables, and fermented milk and cheese. The Nordic foods is high in fibre, low in sugar and contains plenty of fruits and vegetables. The Nordic diet was created by a group of nutritionists, scientists and chefs in 2004. because in the Nordic countries growing obesity rates and unsustainable farming. According to 'The American Journal of Clinical Nutrition' showed these types of foods are comparable with the benefits of a Mediterranean foods. Nordic foods are improves insulin sensitivity and blood lipid profile. Moreover, people can lose the body weight.

III

There are several causes of starvation, so I am going to explain about causes, including political causes and effects, social causes and effects and economic causes and effects.

One of the biggest causes of starvation is political causes and effects. First cause is lack of land. This causes a lot of food problems, when most of the land is owned by few people or corporations. Many smallholders have to work on plantation or in factories or have to leave their land. There is nothing importing or exporting so the government had no choice to raise prices. The prices for tools, fertilizers, seeds, and other farming oriented needs are constantly rising, and the farmer's don't have a constant income and technology. Poor countries are not most supreme, because they cannot create the new things and they cannot buy the things so their agriculture is terrible, and the government isn't doing enough to help them meet their needs. Also, Poor access to credit and markets. farmers sometimes need to borrow money until harvest time or until the market improves because farming depends on the weather and on market prices but banks often refuse to lend money to smallholder farmers while lending money to larger farms. The second major cause of starvation is social causes and effects. 40% of the grain available worldwide is consumed in developed countries such as Japan, the United States and Europe where one quarter of the world population live. Every year, 1.3 billion tons, which is one-third of food being produced for edible use, has been thrown away. In developed countries like Japan, "Inadequate storage" and "Expiration date", in developing countries, even if a lot of crops can be harvested at the same time "can not be stored properly" "There is not enough technology to process. For reasons such as It is wasted before reaching the necessary people. To produce food, you need lots of resources such as water and land, so throwing away food will also make resources unnecessary. About 70% of the water used in the world is used to produce food. For example, to produce wheat and beef used for one hamburger, water of 500 bottles 2 liters is needed. And also If they have dispute occurs, they have to leave the place. so even If they have place to make crops they cannot live there longer.

Finally, also caused by economic. First one is lack of knowledge. In many places, people have lost traditional knowledge of how to produce food. A lot of people do not know rapidly changing conditions, such as overcrowded communities, less fertile land, and changing weather, old methods often no longer work. Almost poor hungry people could not go to school, could not learn. This is cycle. If parents can not go school and then that children cannot go got school . In addition, If young people leave from the city before learning to farm, they will never be able to teach their own children how to farm and the family's loss of land will be permanent. Economically poor people tend to have high food expenses to living expenses. Thus, if the price of food rises or income is not enough, the number and volume of meals will decrease, the food and food items used will decrease, and it will not be a nutritious diet.

IV

I explained about three reasons why we have a lot of kinds of foods, included Patterns of economic organization, trade and travel, Landforms, terrain and soil, cultures or religions, to compare each countries. Then I looked at which country's foods are good for health and why it is good for health. Finally I said that several causes of starvation, including political causes and effects, social causes and effects and economic causes and effects. In conclusion, there are three major causes of each country have different food. There are many reasons and history. Now each countries have different food. Recently the world come to "Global" so the world foods would be change for the future. but, we cannot change nature so we should protect own country foods. And foods have influence on our bodies. If people eat healthy foods they are able to live longer. Actually, now our food came to Western food, that means people getting fat, but we should know other countries food so that's good direction. but of course we have to protect and eat own food. People want to live longer or healthy they have to living while caring. There are a lot of reasons for starvation. Some of these things are very big problem, because many people dead because of foods. That's situation is not good for everyone, not only hunger people. Also It is bad for us. I think that if we are not going to change many things even developed country would be poor direction. For example, Japan is throwing away a lot of foods however Japan have many imported foods. In addition, if we throw away foods, we are going to waste of resources. It means we will have bad cycle of life.

Our life is always connect to food, so we should think of it, and if we can change something of food we have to change by myself. First of all own health. and then to think own countries and whole world.

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The Development of Vietnamese Agriculture Akihito Yoshida

These days, trading is getting more aggressive all around the globalized world. In such a phenomenon affects almost all countries trade goods with free and fast and can go through the most productive goods via worldwide pathways. When look at economic development since WWII was ended up, main capital countries have growth significantly to maintain their wealth, so that they remain competitive in the world market, and also from their supports and aids to developed countries enhanced in the world economic and technological levels in every country. Potentially, contributing innovative politics can impact on country that can enhance domestic production. Since the introduction of “doi-moi” in 1986, Vietnam’s agriculture has improved several aspects where food safety, productivity, and abilities of each farmer. The methods of approaching by the government is fascinating small farmers and buying more yields from farmers. As a results, According to Matthew Pike, In 2017, Vietnam consequently exported over 213 billion US dollars of goods and materials which the number of exports recorded 10 largest exports in the World trading market. This number is lasting notably in the domestic market of Vietnam. However, when I visited in Vietnam, I could see famers who faced crucial difficulties such as ineffective of agriculture, poverty, and disaster. These issues must improve immediately to gain domestic levels of Vietnam's agriculture. In this essay, I will illustrate the advantages and disadvantages of Vietnamese farming based on frog farming, mushroom cultivation, aquaculture and miro finance. and three majors impact on Vietnamese agriculture which are climate change, instability finance, and economic integration especially the effects of agriculture in Vietnam.

I

First, I will talk about pros of agriculture in Vietnam including, mushroom cultivation, frogs, aquaculture, and microfinance. One of the common production agriculture is mushroom agriculture. According to Xuan Linh, who is from the director of the Agricultural Genetics Institute Biotechnology Centre announced that the total mushroom crops in Vietnam produced 250,000 tonnes, with an export amount is US \$60 million per year. Mushroom industry continues to reach higher position in the world market. According to Hue university, the process of mushroom agriculture, collecting the main mushroom season is from April to September. The average of mushroom price is \$55.000 per kilograms. Also, the advantages of mushroom farming demand small scale land, and chapter cultivation price. Almost 90% of people use rice straw after collecting rice. The results of this showed that income from mushroom production was contributing 20-60% of total family income. In addition, the frog farming also supports livelihood of Vietnamese. The frog farming needs small ponds to nurture them with good shape and mix wild frogs. From viewpoint small ponds, people can start to grow frogs easily. At least people prepare to set three different gender types of box, such as male, female, and both. In order to carry out this process, make more retailing frogs effectively. Furthermore, water land cover 4,200 km of total land which is 331,690 km. According to the Ministry of Fisheries and the institute for Fishery Economic, Almost, 590,000 ha of total 250,000 ha lands use as shrimp farming of brackish water, with rest of land used as freshwater. The export income was 260 million which was 47% of total fish exports. The pros of aquaculture in Vietnam is big scale, can increase producing of fish and shrimps substantially. These kinds of farming are supported by microfinance. During the end of 1980, the micro finance system was introduced in Vietnam society. The purpose was solve the poverty and a gap between rich and poor. Some programs focused on only services. There are 4 pros in microfinance. First, the bank so not arrange loans to only help cycle of poverty. As a result, the debts of each person is cheaper than normal bank. Secondly, people who aimed allowance of microfinance, they tend not to let their kids quit school. Thirdly, the services of health and welfare can improve to access to clean water and better health. Finally, the local people impact to create new employment opportunities to get sustainable job.

On the other hand, there are some cons in Vietnam agriculture. In the remaining five communes (Phu Mau, Phu Thanh, Quang Thanh, Hai Duong and Thuan An) have shortages of lands to cultivate mushroom farming due to face poor, less knowledge and frequent disaster. Likewise it is difficult for Vietnamese to grow up frogs. In the mid-latitude states like Virginia, it takes over 3 years from egg to a harvestable size, even good conditions. Frogs refuse to eat feeds only if it is moving feeds. It needs to take extra time and money. Changing the depth and temperature of the pond which is 20 degrees to 26 degrees following the climate also require because frogs are sensitive to live. Additionally, the cons of aquaculture in Vietnam is low produce shrimps which is 70~80 kg and also bad condition shrimp pounds. The mangrove was changed to shrimp pond, but the plot of pond determine uncertain such as too big or small. The local people should abandon old pond and woods to recreate new ones. The state of Minh Hai exchanged shrimp ponds from the mangrove 66,253ha between 1983 and 1995. Also, some part of mangrove area contaminate detrimental atmosphere from industries and house. Also, from the viewpoint of microfinance faced problems. Recently, the organization of microfinance has been decreasing because Vietnam is becoming country which more and more people fail to start up new venture company but eventually they are difficult to return their money who have

been lending. In fact, Vietnamese MFO gets worked slower because they have to obey social-political organizations to sustain their job, Additionally, the microfinance of Vietnam is higher loan compare to other developed countries. Most of MFO in Vietnam are small, so it is difficult to ensure sustainable their long-term ability.

II

Climate change affects agriculture in Vietnam. According to Le Minh Nhat Phd, if sea level rises 1m, it will cause 5% lands loses, 11% population affected, 7% of farmers impacted and 10 GDP reduced. In fact. The cities in Vietnam of Makon Delta will rise 39% of lands, Red River Delta will lose 10% and Ho Chi Minh city will be 20% of land under the sea. People are difficult to cultivate if land is flood or sea level rises. Water is essential for agriculture but there are a lot of water may cause decreasing agricultural production. Also, average temperature increased about 0.5% from 1958 to 2007 and rainfall and wet seasons happens significantly during 50 years. These problems cause that occurred natural disaster more often such as typhoon, flood and drought. Studies by Vietnamese scientists have shown that the Red River Delta has the most sensitive to face climate variability. This area happens the most rainfall fluctuations, and drought and flooding often limited crops productions. According to Springer, climate change impact to river system. In the red river delta and the northern region will increase to less than 2% in 2040 to 2059 and from 2 to 4% during 2080 to 2090.

The gap between rich people and poor people affects agriculture in Vietnam. Vietnam remains poor country but economic growth has increased more than 7 %, and poor people decreased from 58% in 1993 to 11% % in 2010. However, the gap between rich and poor are going up since economic improvement were introduced. According to statistics from United Nations, 29.9% of the Vietnam income occupy in rich people, who account for just 10% of the population in Vietnam. From the viewing point of household in Vietnam, the household in the richest Vietnamese was 8.4 times higher than that of 20 % of the poorest household. Even In 1990, the richest 20 percent of the population earned 7.3 times as much as the poorest 20 percent. Vietnam seems to be prosperity in the world but inside of Vietnam have problem of gap between rich and poor. Additionally, the problem of poverty is getting better and better in Vietnam. However, there still exist. Also, people who are not rich tend to live countryside. The majority of the poor are farmers, in 1998, almost 80 percent of the poor worked in agriculture around 90 percent of the poor people living in rural areas.

Agriculture in Vietnam faces economic integration. Recently, Vietnam's economic growth is developing in the world. Many countries rec recognized developing country for Vietnam. The economic growth in Vietnam decreased 5.8%, while some other ASEAN members show that economic growth was zero rate. Although, per capita income is still very low compared with other region and the economic structure of Vietnam tend to be unbalanced. Some people think that Vietnam economy is generally defined by low productivity, poor efficiency, and management. Focus on the average household in Vietnam, 13 million household averaging 0.3 hectares each for agriculture which is difficult to adopt policies of agriculture, commodity production arrangement, and application of technology to form large production. Also, since joining the WTO in 2007, Vietnam has signed and carried out 7 FTAs and Vietnam will join another 6 new FTA. However, it is challenging for Vietnam.

III

According to FAO, winter temperature tend to increase faster than summer temperature in all part of Vietnam, especially part of northern region in Vietnam reached highest temperature in winter season compared to whole area of Vietnam. There are three types of disaster in Vietnam which are temperatures, rainfall and typhoon. They impact to 7 important things for agriculture which are crop grown rate, water demand, growth and spread of detrimental pests, growth seasons, crop geographic distribution, and rice. First, Crop growth rate is rising temperature that effect to grow crops rate and shorten plant's life cycle. What if 1 degrees go up in Vietnam temperature that would be a shortening of the plan's growth cycle with 5 to 8 days for rice and 3 to 5 days for potatoes and soybeans. Second it will be rising temperature and growing population demand crop water for agriculture, which predicted amount of water will be double or triple by 2100 compare to 2000. At the same time, droughts may affect lack of water shortage in Vietnam. Third, the harmful creature which likely effects the rice-feeding, ear-cutting caterpillars, black cutworms, bark-boring beetles, and fungi, grow up as the temperature increase and changing rainfall pattern. Fourth, Spring season come earlier in Red River Delta that effects to harvest earlier by 5 to 20 days on average. Also, snow season may be late by 20 to 25 days. Fifth, In 2100, it will be difficult to harvest tropical seasons because height above sea level will go up by 100 to 500 m and more 100 to 200 km northward. Sixth, the significant effect to people and crops due to rising sea level, crop yield of rice may drop by over million tonnes. People who are living in flatland should replace other living area which is higher area in Vietnam, and economy of local and national may decrease economy levels due to damage of rising sea level. Finally, Vietnam is the third country of exporting rice all over the world.

However, rice yield rate may go down by 12,5% in 2050 and 16,5% in 2070 in the central and Southern area. Rice yield in entire country will reach lower about 2 to 4 % in 2050, and 3 to 6% in 2070 due to rising temperature.

Another major effect is the rush of citizens to become farmers by the government because of liberalization of agriculture. During 1990s, Vietnam accepted liberalization of trading to all over the world. This agreement effects good and bad for Vietnam agriculture. Over 6 years, economy and maintaining the business operation reached a great consequence of different economic sectors. Also, self governing in running business in Vietnam have been expanded. However, the circumstance into the country is most farmers cannot catch up quality of products and skills for producing due to the policy of government are rushing them over and over to improve own country. Likewise, most agricultural products were exported in the condition of incomplete materials and low quality of products. As a result of this, the fixed products cannot accept of international market due not to fulfill worldwide quality. Due to that reason their products sell low price and profits. According to ASEAN, the ability of Vietnam agriculture to expand international markets has been limited, because lack of experience and export opportunity.

The third major effect is the lack of skills and advancement of females between rural areas and urban areas due to poverty. According to FAO, 36 percent of population can access to sanitized water source, but the average of East Asia and Pacific region is 84 percent. Normally, poor people live in rural area who work agriculture. They are low level education level, poor access to run business and social services. This circumstance effect they may not improve agriculture in Vietnam because lack of skill for agricultural without high level education. Eventually, the amount of crop yield will stabilize in the future. Furthermore, poor people in urban area are deal with new immigrants means unemployed or no jobs. They are difficult to get social services. They do not even work or agriculture, they tend not to earn money. That problem affects the poor gap of rural and urban area. In area of Minot and Baulch that households in rural area with living a lot of females are likely poor but in urban area is not this situation. This is due to poor in rural area that females should stay home as a culture in Vietnam. However, in urban area progress to acknowledge insistence of females.

IV

There are many effects which is climate change, liberalization, and poverty for agriculture in Vietnam. Climate change is the biggest effects for agriculture in Vietnam. Climate change affects crops cycle, crop growth, geographic, and crop yield. In Vietnam, many farmers live in rural area for agriculture but more rural areas are impacted climate change than urban area due to low facility and a lack of social services. I think that Vietnam should adopt short term measure and long term measure for agriculture. Basically, people should do is prevent soil erosion, chose crops for climate change on short term measures. Long term measure is adopt new spices, people who live in same climate teach technique to people in Vietnam. It may be helpful for Vietnamese in rural area.

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The Problems of Africa

Akari Kagawa

In Africa, there are 54 countries. According to UNITED NATIONS, the rate of the growth of population in Africa is the highest in major areas. About 2.55 percent increased every year from 2010 to 2015. The thing which is over half of the growth of population in the world within now and 2050 occur in Africa is estimated. There are many problems in Africa. In this essay, I will list three problems including a lot of children are out of school, the problem which is more girls are out of school compared to boys, and the problem of hunger in Africa, then I would like to talk about the causes of each three problems, and I would like to suggest solutions to mitigate each three problems.

I

In the beginning, I will talk about the problem which is a lot of children are out of school, problem which more girls are out of school compared to the boys, and hunger problem in Africa. First, I would like to talk about the problem of education which is a lot of children are out of school in Africa. According to All in School, the Middle East and North Africa made great strides to reduce the number of the children who don't go to school in last decade, they bringing hope and new chance to millions. However, they have still incomplete business, so the improvement is stop in recent years. 4.9 million children who is the age of primary school and 3.7 million children who is the age of lower secondary school are still don't go to school. In addition, in Sub Saharan Africa, according to UNESCO, the rate of education ejection of Sub Saharan Africa is the highest of all regions. The over one fifth part of children who is from about 6 and 11 years old are out of school. One third part of children who is from about 12 to 14 years old are out of school. Furthermore, according to UNESCO Institute for Statistics, about 60 percent of the children who is from about 15 to 17 years old are not in school.

Next, I'm going to talk about the problem of education which is more girls were out of the school compared to boys. According to UNESCO Institute for Statistics data, in Sub Saharan Africa, about 6 million boys between 6 to 11 years old have never go to school. However, the 9 million girls have never go to school. In addition, according to UNESCO Institute for Statistics, in 2015, about 18.4 percent or 14.8 million boys who is the age of primary school were out of school, however more girls, about 22.8 percent or 17.9 million girls who is the age of primary school were out of school in Sub Saharan Africa. Likewise, more girls who is the age of lower secondary school or upper secondary school were out of school compared to the boys who is the age of lower secondary school or upper secondary school in Sub Saharan Africa in 2015. About 35.1 percent or 12.6 million boys and 37.1 percent or 13.1 million girls who is the age of lower secondary school were out of school. About 53.6 percent or 16.3 million boys and 61.3 percent or 18.1 million girls who is the age of upper secondary school were out of school. Moreover, according to UNICEF Eastern and Southern Africa, the percentages of girls' primary school completion were low compared to the percentage of boys in Mozambique, Malawi, and Burundi in 2006. For example, in Mozambique, the rate of the boys' primary school completion was about 38.3, however rate of the girls was 32.6 in 2006.

Thirdly, I would like to talk about the problem of hunger in Africa. According to Food and Agriculture Organization, about 821 million people or 10.9 percent of people were undernourished in the world in 2017. In Africa, about 256.5 million people or 20.4 percent of people who live in Africa were undernourished in 2017. In addition, about 22.3 percent of people who live in Sub Saharan Africa suffered from shortage of food in 2016. However, the percentage of people increased to 23.2 in 2017. The percentage of people who was undernourished in Eastern Africa which is one of the sub-region of Sub Saharan Africa decreased from 2016 to 2017. On the other hand, the percentage of people who was undernourished in other sub-regions of Sub Saharan Africa increased from 2016 to 2017. For example, in Western Africa, the percentage of people who was undernourished rose from 12.8 percent in 2016 to 15.1 percent in 2017. 2.3 percent increase from 2016 to 2017.

II

Next, I would like to talk about the major causes of the problems which is a lot of children are out of school, the problem which is more girls are out of the school compared to boys, and the hunger problem in Africa. Firstly, I would like talk about the major cause of education problem which is a lot of children are out of school in Africa. One of the major cause why children are out of school is lack of money. According to UNICEF Eastern and Southern Africa, parents often can't afford to defray the direct cost and the indirect cost of school education of their children. For example, buy the textbooks and uniforms. Furthermore, according to Global Education Monitoring Report which is GEM Report, only 65 children who is poor for every 100 children who is wealthy go to school in Sub Saharan Africa. In Northern Africa, 90 children who is poor for every 100 children who is wealthy go to school. In addition, according to the analysis of UNICEF, lacking the money is the biggest reasons that why students don't go to school in Uganda. About one of every six children who have never go to school gave the reason that why they have never attend

the school is the cost of the school education is high. Furthermore, according to the analysis of UNICEF, the things which many parents don't have money for the food, cloths, and school uniform were revealed in the group discussion with the community.

Secondly, I will talk about the major cause of the education problem which is more girls are out of school compared to boys. One of the major cause of barrier to the education for girls is they have to take long time to collect water and lack of infrastructure in the school. According to UNICEF Eastern Africa and Southern Africa, often, girls have to go to collect water before they go to school. It takes long distance and it may take over an hour. Resulting this thing, they may be late for school or absent from school. Children being needed at their house, it is a major causes of children, particularly, girls who is poor drop out the school. In addition, according to UNICEF Eastern and Southern Africa, the access to the safe water is installed at less than half of all schools of Eastern and Southern Africa. Moreover, because without separated washroom which guarantee minimum of their privacy for them at school, girls skip the school or drop out the school. According to UNESCO Institute for Statistics, There were no washroom at the least 60 percent of the schools in Chad, Côte d'Ivoire, Equatorial Guinea, Madagascar and Niger around 2010. For example, in Niger, about 75 percent of the schools didn't have washroom around 2010. All schools of Mauritius and Rwanda had washroom which is not separated around 2010.

Thirdly, I'm going to talk about the major cause of problem of hunger in Africa. One of the major cause of hunger problem in Africa is conflict. According to Food and Agriculture Organization of the United Nations, the prevalence of undernourishment in Sub Saharan Africa decreased in the first ten years of the millennium. On the other hand, there were no progress in 2015 and 2016 in the many countries of Sub Saharan Africa. The main cause of the thing was the effect of conflict or climate condition which is adverse. The result of these things, harvests become poor and loss the livestock. In Sub Saharan Africa, the prevalence of undernourishment in the countries which is affected by conflict and the crisis is protracted was about twice higher than the countries which is not affected by conflict. Furthermore, according to AFRICA CENTER FOR STRATEGIC STUDIES, over 107 million Africans of the total 143 million Africans who is experiencing the food insecurity which is the level of stressed or crisis or emergency live in the country which is affected by conflict. This means about three fourths of Africans live in the countries which is affected by conflict. Over 15 million people who live in Nigeria, Sudan, and Cameroon which is in conflict are experiencing acute food insecurity.

III

Finally, I would like to propose solutions to mitigate the problem which is a lot of children are out of school, the problem which is more girls are out of school compared to boys, and the problem of hunger in Africa. First, my solution to mitigate the problem which is a lot of children are out of school is government of each countries support the children to go to school. For example, provide the textbooks from government. In addition, make school system which children can go to school in their own clothes, and make the school system which they don't have to buy their uniform. Lower the cost of school education by these things and make the school which students easy to attend.

Second, my solution to mitigate the problem which is more girls are out of school compared to boys is make the places which they can collect water easily, and improve the infrastructure of the school. According to UNICEF Eastern and Southern Africa, study of Tanzania found that the percentage of attendance of school increased about 12 percent when they are able to collect water in 15 minutes compared to take over 30 minutes to collect. From this fact, I believe that more girls can go to school by increasing the number of places which they can collect water and make that places near from their house. Furthermore, the washroom, especially, separated washroom should be established at school. I think that privacy should be protected. I believe that make more schools which both boys and girls can go to by increasing the places which they can collect water easily and improving the infrastructure of school.

Third, my solution to mitigate the problem of hunger is ending the conflict and supporting the citizens. According to Department for International Development, one of the cause of conflict is lack of equality between groups rather than individuals. I think that the causes of conflict are complex and difficult to solve, however the conflicts should be ended, then mitigate the hunger problem and make the peaceful countries. So, I think that government act to solve the problem of conflict is the thing needed. In addition, supporting citizens who live in the country which have the problem of hunger is necessary things to governments. The harvest is poor and loss the livestock, so I think that help from other countries is need, such as providing food.

In conclusion, there are problem which is a lot of children are out of school, the problem which is more girls are out of school compared to boys, and the problem of hunger in Africa. In addition, there are major causes of each three problems, then there are three solutions to mitigate each three problems. I suggest the solution which is government of each countries support the children to go to school, such as providing textbooks from governments so that mitigate the problem which is more girls are out of school, because one of the major cause of the problem is lack of money. In addition, I propose the solution which is make the places which they can collect water easily and improve

the infrastructure of the school in order to mitigate the problem which is more girls are out of school compared to boys, because one of the major cause of barrier to the education for girls is they have to take long time to collect water and lack of infrastructure of the school. Furthermore, I suggest the solution which is ending the conflict and supporting the citizens in order that mitigate the problem of hunger, because one of the major cause of the problem is conflict. There are a lot of problems which should be solved in Africa. I think that , especially, there are serious problem in Sub Saharan Africa. For example, according to Food and Agriculture Organization about 20.4 percent of people who live in Africa were undernourished in 2017. It is serious problem. However more percentage of people which is 23.2 percent of people who live in Sub Saharan Africa were undernourished in 2017. Moreover, I talked about three problems, however the causes of these problems are other issues which need to solve, such as problem of infrastructure and conflict. Finally, I think that these problems need to be solved, and the countries need to become the citizens easy to live in.

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America's Obesity Crisis Airi Katayama

Obesity, diabetes, and other diseases caused by poor diet and sedentary lifestyle now affect the health, happiness, and vitality of millions of men, women, and, most tragically, children and pose a major threat to the health care resources of the United States. According to the Centers for Disease Control and Prevention (CDC) labels the obesity problem an "epidemic." Within United States, 64.5 percent of Americans are either overweight or obese, with the number growing. The environment, much as it encourages overeating, makes sedentary behavior almost inevitable. As with food, one can take the individual responsibility approach, educate or implore people to be more active, and then hope for the best. This may be hopeful for some people in some settings, but broader change is necessary. In this essay, I will three causes of American obesity, including biology mismatched with the modern world, the toxic environment and changing things, to determine if the negative effects can be avoided.

I

One of the major causes of American obesity to mismatched with the modern world, mostly due to make big food. First of all, I will talk about biology mismatched with the modern world. In the United States, obesity now contributes more to chronic illness and health care than does smoking. There are three main bad affect environment. First, there are risk from the physical environment. Targeted marketing by food companies, poor foods in neighborhood stores, lack of supermarkets, distance to fitness facilities, neighborhood crimes, and so on. There are various kinds of poisoning in the world, but there are food addiction for those with obesity problem. The American people must maintain their own health. Daily fitness is the most effective as a countermeasure to that. If American can easily fitness in the city there is no vicious circle. Oklahoma City, which has the highest obesity rate in the United States, should do it in particular. If American convert calories burned by doing fitness, their consciousness for health and obesity will be high. The people think it is a good thing to spend energy on fitness. Secondly, there are risk from the sociocultural environment. High-calorie traditional cuisines, insecurities about having enough food, cultural attitudes about physical activity, and so on. There is a day called the international no diet day in the United States. However, in the United States where the degree of obesity increases, there is a tendency to discriminate obese people. The word Fat sounds like discrimination terms, but they do not feel bad. Because it was the organization called NAFTA (the National Association to Advance Fat Acceptance) that first used official fat words in the United States. In 1969, NAFTA were established with the aim of eliminating discrimination and the probability of society equally treated with dignity in each aspect. It became the big movement by this fatty revolution after 1990. Thirdly, there are risk from the economic environment. Family income and cash-flow problems, cost of exercise equipment, limited government investment in park and recreation facilities in inner cities, and so on. Obesity-related economic total revenue in 2006 is \$ 315.6 billion. This is about 3% of the total US expenses. This like economy can be divided into "fat economy" and "lean economy". Fattening economy is a food service industry represented by high calorie fast food. Among the fat economies, there are aggressive weight loss measures such as surgery that shrinks the stomach itself and liposuction surgery, with huge amounts of \$ 6 billion and \$ 1.4 billion flowing in each. America is a genius country for product development to make people lazy, that is to make them obese. On the other hand, there is a diet industry in the thinning economy. Low calorie beverage revenues of \$ 16.8 billion, also foods \$ 8.2 billion, publications \$ 1.8 billion. Entrepreneurs and product developers themselves are fat and they are obesity affirmative economies that often start business according to their needs.

II

One of the major causes of American obesity to toxic environment, mostly due to exist special problems in minority groups. Next, I will talk about a primer on exercise and health. One study found that 14 percent of all deaths could be attributed to the combination of diet and physical inactivity. Another estimated that according to World Health Organization 23 percent of all deaths from major chronic diseases could be attributed to sedentary lifestyle. One study found that children spend only twelve to thirteen minutes daily engaged in vigorous physical activity, compared to ten hours in sedentary activities. Two hours weekly of sport or physical activity is the national goal in Britain, but only 25 percent of children currently meet this goal. The two most notable projects, but are quite innovative. They are CATCH(Children and Adolescent Trial for Cardiovascular Health) and SPARK(Sports, Play, and Recreation for Kids). These programs have been implemented it incorporate activity into the school routine, to increase movement in PE classes and in school in general, and to encourage children to be active outside of school. The results have shown improvements in children's physical activity, diet, and medical outlook, and in some cases have shown enduring effects that last for some years beyond the end of the program. Secondly, I will talk about Junk Food like schools, commercialism, and unhealthy eating. The national School Lunch Act, signed in 1946 by President

Truman, is administered through the U.S. Department of Agriculture (USDA). The national school lunch program (NSLP) is a federally assisted meal program operating in more than 99000 public and private schools and residential day-care institutions. To participate, schools and school districts must meet federal lunch requirements and must offer free or subsidized lunches to eligible children. The schools then get cash subsidies and donated commodities from the USDA for each meal they serve. Lunches must contain no more than 30 percent of calories from fat (less than one-third of these calories from saturated fat) and one-third of the Recommended Daily Allowances for protein, vitamins A and C, iron, calcium and calories. The program cost \$6.4 billion in 2001. School and community organizations could play an important role in sensitizing communities to the importance of nutrition. Nutrition and physical activity in schools would be a natural cause for parent-teacher organizations to tackle. Civic-minded groups such as the Junior League, Rotary, and local foundations might rally members around this cause. Current health education programs often teach children to understand advertising, to see through messages targeted at teens, and to resist exploitation. Buffering children from cigarette and alcohol advertising is often done in an attempt to teach "media literacy". Food advertising should be added. Thirdly, there are the inexorable economic march to obesity. The epidemic of obesity cannot be understood or reversed without recognizing the fundamental role of modern economic conditions. This vertical integration has some advantages, namely that more food is now produced for less money. The percent of personal income needed to feed oneself has declined sharply. There are also significant downsides. Shrinking genetic diversity in plants and animals, resistant strains of bacteria developing from the heavy use of antibiotics, and the effects of pesticides and fertilizers on the environment are all major concerns arising from the food "monoculture" that has developed. (the worldwide growth in obesity) In a consumer survey by the Food Marketing Institute and Prevention magazine, over half of consumers agreed that "It costs more to eat healthy foods. This perception is supported by facts. Several studies in Canada reported that it is difficult for consumers to afford a healthy diet, particularly single adults. The National Population Health Survey found that almost 10 percent of households were not financially able to purchase enough food or were forced to purchase low-quality, low-nutrition foods. Food insecurity was linked to obesity, depression, poor/fair health, and various chronic conditions. These average statistics reflect what one sees in day-to-day food choices. Apples range from \$1-\$2 per pound (usually one to four apples, depending on size), compared to a Big Grab bag of Doritos for \$.99, or two Big Macs for \$2 when McDonald's runs a special. Tomatoes can be \$1-\$5 per pound (usually one to four tomatoes), while a large bag of cheese curls might be \$1.49. People were once paid to exercise-work required physical labor. Now people are forced to be inactive, must make conscious choices to do otherwise, and must pay for the opportunity. Increasing physical activity must be a priority if obesity is to become less of a public health problem. Some economic changes could be used to help correct the increasingly sedentary lifestyle of the nation. Changing major transportation initiatives to include support for walking and biking options would be a start. This could be done through the massive transportation reauthorization legislation.

III

One of the major causes of American obesity to toxic environment, mostly due to exist special problems in minority groups. First of all, I will talk about a centrist approach. There is a more centrist position between demonization and glorification, between drastic action like prohibition and no action at all. It is a position that views industry, because of its history, with skepticism and leads not to sales prohibitions but to considered actions that will protect public health. Many who view the tobacco companies as demons would not support a ban on cigarettes but are in favor of taxing tobacco products, advertising to children, restricting where smoking can occur, and so on. While a complete ban on tobacco might have had more impact, these other actions have become acceptable to the public and are working. A centrist position with food may offer the best opportunity to garner wide support and still make a difference. The food industry may make some changes voluntarily and in other cases may need more encouragement through regulation and legislation. The nation cannot afford weak, inconsistent, and superficial action grounded in fears that the food companies will be angry. Proposals to change the food environment present the food industry and the nation with serious challenges. The industry must fight off unwanted legislative, regulatory, and legal action that could damage business while at the same time it engages in practices such as marketing to children that are increasingly unpopular. The nation must decide how to deal with the food industry. Food companies confront the paradox of claiming public health as their priority while knowing that profits increase when people eat more. If the nation moves to a healthier diet, some segments of the industry will benefit and others will suffer. But for the industry as a whole, lower food consumption will lower earnings. Business acts in self-interest and industry leaders must protect their jobs, so significant changes in diet are frightening. The nation and its leaders are at a crossroad and must decide soon whether the food industry should be trusted as an ally or kept at arm's length. In speaking about inclusion, collaboration, and involving all stakeholders, the industry infers that its business aims are consistent with public health priorities, and for the most part the industry is taken at its word. Secondly, I will talk about McDonald's and Frito-Lay. McDonald's made news by promising to change the oil used to cook fried food items. The most notable item is

French Fries, but other key foods like chicken nuggets, fried chicken sandwiches and hash browns are also affected. The new oil will have a 48 percent reduction in trans fatty acids, reduce saturated fat by 16 percent, and increase polyunsaturated fat by 167 percent. A spokesperson from McDonald's says, "It's a win-win for our customer because they are getting the same great French fry taste along with an even healthier nutrition profile." McDonald's worldwide serves 46 million people each day, and in the United States uses 7 percent (3.2 billion pounds) of all potatoes grown for its fries and hash browns. The McDonald's announcement was embraced by high-profile health experts such as Dean Ornish, who stated, "From a nutrition standpoint, this is going to have a major and immediate impact." The President of the American College of Nutrition said, "I applaud McDonald's for its leadership in this area and urge others to follow their lead." In the spring of 2003, McDonald's announced the change in oil was delayed indefinitely, reportedly because of concerns that sales would be adversely affected. Thirdly, I will talk about taking decisive action. U.S. and world health authorities have declared obesity an emergency. Words like epidemic and crisis are used to describe the severity of current conditions. Powerful forces are causing the problem, fueled in part by massive financial interests. Nothing short of bold, innovative action is likely to have an impact. A new committee here, another report there, the food companies making minor changes, and the president exhorting people once a year to exercise and eat better are helpful, there are no match for the toxic environment.

IV

In conclusion to these three major causes is that, there are a lot of negative effects from providing food that will be very difficult to solve. The world is undergoing an immense transition in diet and patterns of physical activity. Millions upon millions of people are affected adversely by these changes, with the numbers growing by the day. The list of diseases caused by poor diet, physical inactivity, and obesity is long and disheartening. Beyond disheartening is the suffering caused by the combination of these diseases and the psychological and social consequences of being overweight. Biology and environment conspire to promote obesity. Biology is an enabling factor, but the obesity epidemic, and the consequent human tragedy, is a function of the worsening food and physical activity environment. Governments and societies have come to this conclusion very late. Increasing physical activity is central to addressing the obesity crisis. Many factors in our culture are barriers to activity. These social and economic factors, such as suburban sprawl and more widespread use of energy-saving devices, are a mounting presence even in developing countries. Encouraging the population by exhortation is likely to help to some extent but must be combined with innovation in changing the environment. It must be easy for people to act in a healthy manner, so times, places, and incentives for people to be physically active must be engineered into daily life. Communities have not demanded that schools change because children's nutrition and the prevention of obesity have not been priorities. They have not been local priorities because state and national efforts have been weak, and the food companies have been allowed to roam free among our children. Something is dreadfully wrong. That the USDA might have been expected from nutrition activist groups, not a large, conservative government agency responsive to the food industry. We salute the USDA for this effort and suggest that these keys become guidelines and then regulations and that elected leaders provide the funds necessary to implement meaningful change. Changing the economics of food and physical activity are essential to reining in obesity. Exhorting people to behave differently, criticizing parents for doing a poor job with their children, and supporting small programs with the "first here, then there" approach will not be sufficient. More fundamental changes are necessary, because fundamental economic factors are central to the obesity epidemic. And Challenge the industry for connections with tobacco and for funding provided to shadow groups like the Center for Consumer Freedom that fight efforts to curtail smoking or to change practices of the food industry.

Fashion Trends Shuri Omae

Fashion trends come and go; meanwhile, a society's values are established and evolving characteristic to their beliefs and culture. Fashion is just not an ambitious projected image of are interpreted good old value to fulfill some function or agenda alike but rather a evocative and refreshing concept worthy enough to be portrayed for society's appreciation that makes us even more instinctive. In the society, the individual's appearance is the ticket to transmit nonverbal communication signals such as possible cues about his / her social stature, values and lifestyle. Fashion communication has undergone a 360 degree shift in its communicable aspects staring from projecting a basic image of how we look like and how we feel like to expressing our emotional experiences through interactive implements in the dress. The success of the fashion trend lies in the way the society interprets the fashion trend and judges it. Hence the impact is measured by the barometer of social acceptance which in turn is driven by the several motivational forces that under line the people's values and behavioral traits. Today's consumer culture is driven by aspirationalism that diminishes the gap between the rich and economically volatile sections when it comes to accepting and adopting a trend. A classical example is, a consumer in China saves her three months salary to purchase a LVMH handbag. It does not stop here as the people's cash liquidity is extended by the easy provision of personal loans facilitated by both private and nationalized banks alike. This is even extended by few Brands' initiatives to offer fashion products on a credit basis with easy monthly part payment options

I

In fact clothing and fashion are carriers of wide range of ideological meanings. The fashion trends portray a visual culture and style of dressing that models the consumer identity in a specific environment. The social agenda of these fashion trends is to express the consumer's identity in terms of lifestyle choices and their attitude. The lifestyle choices changes from one period to another period. In other words they suggest the pattern & manner of dressing befitting an occasion that sets forth a standard. these clothing standards are in fact derived from the prevailing social values and their emotional expectations. The Fashion trend entails design focus and details on a garment noticed at different locations of the garment namely collars and necklines, them lines, waist lines, shoulder line, sleeve lines and hip lines. A sneak peek review of Google fashion trends report tell us about the status of the trends floated by the fashion clothing articles. There is a steady rise in the consumption of styles like waist trainer, jogger pants, palazzo pants, tulle skirt and midi skirt. While styles like white lace dress, high waisted bikini, romper, shift dress and white jumpsuit have recorded seasonal growth. Not only had they added on any element of Elegance and natural well being to the contemporary human existence but have demystified few common fabric notions in the society like knitted stretch denim is suitable only for lounges and tulle is appropriate only for elegant party wear or Haute couture. Be it the kinematic comfort of jogger pants that meets the requirements of frail customer who would like to do away from the heavy trousers that bruises the skin or the very low weight and airy silhouette of tulle skirt or the easy to don and doff jumpsuit have all added on a renewing features and pepped up the existing look. The agenda of each fashion trend is to enhance the look and feel of the customer. From the user search behavior patterns, it is clearly evident that many fashion trends have bulldozed the issue of class entirely, and instead follow patterns of "personal identity" dictated by psychographic parameters based on age, race, gender, sexuality, leisure activities, and various sub-cultural allegiances. This is a classic example of how contemporary fashion cycles operate differently from purely top-down models (Crane 2000). And trends themselves are in fact rolled out by the forecasting services following thorough ethnographic studies. As the living conditions, the environment and the cognitive engagement in the life of a person changes simultaneously the attitudinal expressions also change. And in an era where the construction of personal identity assumes absolute importance for an individual, the fashion designers and forecasters alike float their agendas to cater to these special emotional needs driven by lifestyle and values. Clothes are never a frivolity; they are always an expression of the fundamental social and economic pressures of the time (Laver 1968). WGSN Executive Vice President Leticia Abraham Also share the same view that fashion is one of the most evident and prolific places for individual and social expression and is a means of communication but not a revolution in itself. Another Example is the rise of street style which proves fashion is an essential mode of self expression. Attitudes serving a value-expressive function (i.e., value-expressive attitudes) help people communicate their central beliefs, attitudes, and values to others through their possessions (Katz 1960). And fashionable garments and accessories are such possessions that help people communicate who and what they are. In this context, do all people have a penchant to adore fashion trends are to be looked into in close proximity? The answer is definitely no except one exceptional section of the population: the youngsters. The youngsters comprising of adolescents (12 to 17 years), teens and young allocate more time for their public appearance

than to studies. The peer influence, hero worship which becomes part of adolescent identity creation is the primary reason why adolescents aspire for more fashion concerns than any other age group. Colleges generally project the picture of current trend in fashion. Therefore it is normal for a college student who is in the identity creation stage of Erikson's psychosocial development to look for trendy dress choices (1968). When a particular style of dress comes in vogue or used by film stars and models, it is blindly followed by college students (Pathak, 2013). Fashion trend today does not give precedence to comfort and practicality. Sometimes the dress, that goes beyond modesty and simplicity, which does not allow someone to sit or walk properly, is attracted by youth. Untidy, shabby looking hairstyles, which are trendy, attract Generation X youngsters. Rather it reflects the deconstructive style preferences prevailing in post modern consumerist society.

II

It is amazing to see how the different events in history have influenced and changed the way people have dressed throughout time. Some of the most popular fashions are classic, they can stand the test of time and hardly ever "go out of style", only experiencing minor changes to keep up with the trends. Other clothing items could be considered "fads", styles that are only popular for a short season and then never worn again. Often certain fashion trends are dependent on the tastes of particular groups of people or cliques and are usually associated with social status or cultural preferences like the type of music a person likes. Fashion can also be influenced by world events such as war or the economy. For example, during World War II, people were only allowed a certain amount of fabric so they were forced to create simple outfits that were practical enough for wartime duties. From the 1920s to the 1990s, popular fashions reflected the mood of each decade and showcased changes in society as the styles of clothing and accessories evolved with the times. In the 1920s, the jumper blouse was introduced and became incredibly popular. Usually the jumper blouse was made of cotton or silk and had a sailor collar. Perfect for pairing with a skirt, it usually reached just below the hips and would be accompanied by a belt or sash. Another popular type of twenties blouse was a low-cut v-neck shirt with a chemisette attached to promote modesty. Knitted long-sleeve shirts with rounded collars and tank blouses were also popular in the decade. For men, polo shirts, dress shirts and sweaters were the tops of choice. Going into the thirties, feminine blouses that featured v-necks and long bow ties attached around the neck, sleeveless blouses and knit shirts of satin and linen were popular. During the war-torn forties nylon and silk were replaced with rayon and viscose for formal tops, while terry cloth, linen and even canvas were used for leisure shirts. Women who worked during World War II wore military style shirts that had button-up collars, and women who were a part of the American Women's Auxiliary Corps would wear a full war military outfit. After World War II ended, up until the mid-1950's trends in women's fashion changed again. Round-neck styles on sleeveless shirts or long sleeve shirts were popular, as well as polo-necks. Dolman sleeves dominated fashionable tops in the fifties and sixties, too. The 1960s brought ethnic print blouses, ribbed turtleneck sweaters and boat-neck tops into mainstream clothing. And, shirts for men and women often featured "wild" patterns. From the late sixties to the mid-seventies, brightly colored shirts and blouses with psychedelic patterns were trendy and hippie fashion made Indian cheesecloth shirts, peasant tops, tunics and Nehru jackets popular for both men and women of the era. Space-like and futuristic fashions also became popular and many tops were made out of suede, leather, vinyl and plastic. In the 1980s, as styles became slightly more casual and T-Shirts and polo shirts became acceptable tops, and for formal or business-wear, boxy tops with shoulder pads, blazers, dress shirts and sweaters were popular for men and women in the decade. Over sized tops were popular in the 80s and 90s as well. The 1990's saw a lot more commercialization of fashion with designer labels appearing on the outside of clothing as a way to promote status and trendiness. That trend continues today as it is not uncommon to see people wearing stylish casual shirts that host a bold Guess or Ralph Lauren logo on the front. The nineties also saw an increase in the popularity of crop tops and halter tops as women's styles became more provocative. In the late 80s, 90s, and in today's fashion, T-shirts have become more of a way to express individuality and a person's tastes and preference with sassy catch phrases, funny pictures, or pop culture references appearing more and more in the mainstream. In the 1920s, women's shoes would often feature high and wide heels whether on a pump or loafer style shoe. Many women would even wear heeled shoes with their swimming costumes as a mark of femininity. Oxfords of varying styles and colors were popular too with men and women, as well as lace up boots. During the 1930's strapped heels and pumps surged in popularity, while more traditional styles of heels were still worn. For men and women, laced leather leisure shoes were popular for outdoor activities and exercise during the decade. In the forties, as a result of the war, shoes became more conservative and practical. Women's shoes were usually made with flatter heels and had either cork or wooden soles. Flat shoes, sandals, heels and pumps with rounded toes and feminine lines were worn by women in the 1950s. Saddle shoes, white lace up shoes with brown or black leather accents, were also popular for both men and women. Canvas basketball shoes (high-tops) or black leather oxfords were worn by men. Suede shoes also enjoyed moments of popularity during this decade. In the 1960s, black slip-on boots (most likely of leather or faux leather material) were popular for men and women, and heels became thinner on pumps. Vinyl boots,

moccasin-style loafers with wide heels, wedge heels, and slip-on heels with leather cut-out patterns were all popular in the 1970s. Sandals and western style cowboy boots were also popular with both men and women. In the 1980s, pumps were designed with higher and thinner heels than in decades before and they became more of a hit. For casual wear, tennis shoes (both high-tops and standard ankle high shoes) and leather dress shoes were very popular. Flats became popular too, especially with working women. By the 1990's, styles had returned to Earth and the casual look was key. During this decade leather substitutes became more popular due to environmental concerns, and cork-soled sandals like Birkenstocks defined the alternative look early in the decade. Walking shoes had bulkier heels, and gym-type athletic shoes were most people's everyday choice. As with the late 1980s and 1990s, branding became a driving force behind shoe sales. People would show off their Reebok, Nike or Adidas shoes with pride and special editions would sell for hundreds of dollars. From the 1920s to the 1990s, accessories have changed tremendously, but some items like jewelry have always remained popular. Fashionable hats were highly popular from the twenties to the fifties and were often an everyday item in a person's ensemble. For women in the 1920s helmet style, draped hats, cloches, turbans and pokes were all popular and usually featured a variety of fabrics, cut-outs, lace accents, feathers or other details. In the 30s, 40s, and 50s other styles of women's hats were popular as well with berets, homburgs, bumpers, bonnets, and wider brimmed hats all seeing time in the spotlight. For men, bow ties and long ties have alternated their turns in the favor of fashion. From the twenties to the nineties the length, width, fabric, colors and patterns of neck ties have varied according to trends, but they have almost always been a necessity for men's business dress and formal wear. Men would wear fedoras, golf caps, automobile caps, Panama hats and other nearly timeless styles of hats up until the seventies, after which hats became less popular as casual styles started to dominate the scene. Baseball caps, skull caps, beanies and other types of casual hats remain popular with men and offer a way to display their favorite sports teams to the world. Handbags and purses have also always been popular with women, but the styles have changed throughout the decades. In the twenties and thirties, handbags would often be used as vanity bags that featured a built-in mirror and could be used to touch up one's make-up and hair while out. In the fifties and sixties handbags became more of a fashion statement and would coordinate with the type of occasion one was attending, larger, more practical bags were used for shopping or a day out with family while smaller, fancier bags would be used for parties or fancy evenings out with friends. In the seventies, eighties, and even nineties, handbags and purses became more of a catch-all with women narrowing their collection down to just one or two, a more formal bag and an everyday work type bag. Presently, the type of handbags women own have become even more of a status symbol than in the past, with designer bags from Coach, Dooney & Bourke, Fendi, Prada, Michael Kors, Louis Vuitton, Kate Spade, and others costing thousands of dollars being the only purses women use, and often the only luxury piece of clothing many women own.

III

"Clothes are destroying the environment" Even if it says like this, it is hard to imagine that ornate clothes lined up in the show window drain CO₂, destroy forests, and soil the river and the sea. However, the load that the fashion industry is giving to the environment is surprisingly large. For example, the climate change problem. In the Paris Agreement, it was decided to make the emissions of greenhouse gases substantially zero in the second half of the century, but the CO₂ emissions of the fashion industry are ever increasing. It is expected to increase by over 60% over 2015 and to about 2,080 million tons by 2030. This is almost equal to the amount of CO₂ emitted from 230 million passenger cars in a year. There are also many uses of chemical substances. Cotton occupying about 30% of the material of clothes accounts for 3% of the world's agricultural land, but this little land uses 16% of total insecticide and 7% of total herbicide. Many farmers suffer from health damage such as nausea and cancer due to the influence of these pesticides. Also, chemical substances such as heavy metals and environmental hormones during dyeing contaminate the river and the sea, depriving local people of the drinking water. There are also survey results that 20% of freshwater contamination is due to textile processing and dyeing. Clothes also use a lot of water. The amount of water required to make a T-shirt is said to be 2720 liters. If the average drinking water of the day is about 1.5 liters per person, it will be about 5 years of water being used. For the first time I use a lot of water for cotton cultivation. Depending on the cultivation area, 10,000 to 20,000 liters of water is required to make 1 kilogram of cotton. Especially dyeing uses a lot of water. It is said that 85% of the water used in the whole production process is used for dyeing and 100 to 150 liters of water is needed to dye 1 kilogram of fiber. It is predicted that the supply-demand gap will be over 40% by 2030. It is clear that it is not the case when using a lot of water for fashion. It is also concerned with the problem of microplastic. Micro plastic is plastic less than 5 mm. It is estimated that up to about 13 million tons are drifting in the ocean by estimation. It is evident that this adsorbs harmful chemical substances such as PCB and concentrates it by a factor of 1,000,000 times. I wonder how clothes are related to this problem. Currently, about 60% of clothes are made from synthetic fibers such as polyester and nylon, that is, fibrous plastic ※ 5. Every time it does laundry it becomes fine fiber and flows to sewage. Fibers are so fine that they can not be caught in the sewage treatment

facility and flow to the sea. Flowing fibers enter the body of the fish and are concerned about entering our body. And garbage problem. Every year 92 million tons of fiber is discarded from the fashion industry, but it is estimated to increase by 57 million tons in 2030. This is equivalent to putting out 175 kilos of fiber waste in a year when converted per capita. The 3R (reuse, recycle, repair) rate of clothing in Japan is about 26%. It is considerably lower than the recycling rate (about 80%) of PET bottles and aluminum cans. The remaining 70% or more will be incinerated or landfilled. Japan relies on imports from overseas, about 95% of clothing. In other words, it takes all the energy to carry large quantities of clothing and throws away most of it as garbage. There is no other choice but a waste.

IV

In conclusion, it is an expression of the feelings and values are their motivating forces or directional forces that help the consumer to make a decision. In case of a value-expressive attitude toward a product, the consumers are motivated to consume it as a form of self-expression (Snyder & DeBono 1985). This growing trend of self awareness for one's look has influenced every aspect of Generation Z individual behavior and is reflected in every sphere starting from social media platforms to real life purchase decisions. This phenomenon of emboldened self expression and preference for no holds barred anonymous style has challenged the core social agenda of forecasting agencies. Thus it has pushed the forecasting agencies to reconsider the parameters of forecasting ushering in a new environment for modeling. The most befuddling is the unpredictable nature of selfie composition patterns leaving behind only the function of expression that is to increase one's social media presence and carve a niche for himself or herself. So the trend of the day is self expressive anonymous style that tends to remove social prejudices about fashion in the society. The leniency is towards flaunting what is theirs in spite of mimicking others rather going all the way to savor and appreciate what they and their close knit friends in the group engage and unravel upon. Further today's anonymous style trends opens up the societal expressions unheard and unseen ever before just evocative of the spirit of our moments that does not bother whether the content is worth artistic and meaningful which could give a hint or two about the individuals real existence and real needs.

Food Supply to Mountainous Areas in Nepal

Asumi Tomimuro

Poverty is one of the most serious problems people face in Nepal. It is said that Nepal is the poorest country in Asia. According to the Columbia Broadcasting System, just under 50% of the population has lived in the hilly and mountainous areas in 2011. It means the half of the population have faced food poverty. In addition to this fact, according to Central Bureau of Statistics (CBS) of Nepal, around 30,845 hectares of land owned by almost five percent of households became uncultivable due to the climate-related hazards in a past decade. Rainwater is used a majority of the land under cultivation (76%) which has been affected by the erratic patterns of rainfall, drought, flash floods, landslide over the years. Especially, the cutback of winter crop production because of lower precipitation after monsoon directs a concern of food security among those residing in hilly and mountain areas. Moreover, there are few developed roads and only 43% of the population can access the year-round roads. Due to the inadequacies in the transportation infrastructure, the surplus crops in the Terai region where agriculture is thriving can't be transported to mountainous areas. In this essay, I will describe the causes and effects, and find the best solution.

I

There are two causes of the food shortage in hilly and mountain areas in Nepal. The national land of Nepal is geographically divided by altitude, and there are three types of regions, Terai, Hill and Mountain. The Terai Plain is flat land, that the altitude is less than 300 m. It accounts for 23% of the land area and 45% of the population of total 29,427,578 people. It is a granary zone. The hill region has an altitude between 300 and 2500 m. It is occupied with 42% of the land area and 46% people live there and cultivate mainly millet. The mountain area, which is the area with the highest altitude 2,500 m or more, is ranked for 35% of the land area and 7% of the population. It is unsuitable for grain production, corn and rice can't be grown. People can grow only wheat and grains. However, rice is a staple food in most areas of the country, and in some hilly area, a corn and millet mush are usually eaten. In addition, residents depend on rainwater to do crop cultivation. Agricultural crops in Nepal have been seriously affected because of drought and flood caused by weather instability in recent years. The second cause is the cost of transportation from the southern area which is level ground. The southern region that occupies 17% of Nepal is a fertile land and has a margin of food production. However, in mountainous areas, they can't even make enough crops that they consume themselves because it is not easy to make crops there. In addition, the surplus food in the southern area is transported to India, which is cheaper in cost than to transport to the hilly or mountainous areas, so they have no domestic food supply. The mountainous region is also difficult to make crops and the surplus food made in the southern area is not supplied.

By food shortages in the mountainous areas of Nepal, the difference in poverty domestically is born and it is difficult to overcome is one of the world's poorest countries. A difference in poverty occurs between the flat area and the mountainous area in terms of policy and cost. Unfortunately, the hilly and mountainous areas have few opportunities to benefit from government policy for geographical reasons so not only problems agricultural development but also medical care, health measures, environmental problems are serious.

It is necessary to organize the residents to solve this problem. But that is not an easy thing. There are 16 ethnic groups in the mountainous area, and all the groups are in food shortage. Moreover, in the area slightly lower than that, 33 out of 39 groups are the food shortage. It is difficult for organisation and government to help them and if this problem is improved by organisation and government, it will not be sustainable development. So inhabitants need to cooperate with each other. Instead of getting surplus food in the southern region, make crops enough to earn money themselves.

II

The inaccessible situation to the food has a serious effect on human health. In fact, half of all Nepali children are malnourished, and incidence is excessively higher in the mountainous regions. In hilly and mountainous, about 518,000 children under five years of age are suffering from acute undernutrition, or wasting, and have a heightened risk of morbidity and mortality. Prevalence of stunting among under 5 years children in those areas is 36%. Stunted growth prompt not only the increase of mortality and morbidity, but also lower cognitive, motor, and language development. On the economic side, it makes people spend their money on health expenditures and opportunity costs for care of sick child. To think about long-term consequences, people may not be able to take out learning capacity and unachieved potential because it makes school performance worse. Furthermore, their work capacity and work productivity will decrease.

Most of the families battling malnutrition are entrapped within the vicious cycle of poverty. The lack of infrastructure maintenance to food and water access among the poor makes lower purchasing power and further drive

them to a swirl of food insecurity and malnutrition. As food prices increase, the monetary price needed by individuals also rises. Therefore, those who do not increase their income even if the food price rises are more likely to fall below the newly set poverty line, and the number of the poor increases with the rise in food prices.

Finally, the insecurity of food and water effects on not only people living in hilly and mountain area but also the whole country. As I stated before, the majority of farmers in hilly and mountainous are the poor. They don't get enough income because they are engaged in subsistence farming. The methods of cultivation are old and unskilled. In addition, fertiliser is deficient so they are in an environment hard to grow crops. The productivity of labour is low due to these circumstances. Under such a situation, a massive national product is consumed on consumption purposes mainly. It is a rich group that is in a position to save these people from such a situation. However, they spend money on luxurious goods and foreign product. Thus, their demand does not enlarge the size of the market.

III

One of the reasons why surplus food is not supplied to mountain and hilly are is infrastructure development is incomplete. The surplus food in the southern area is transported to India, which is cheaper in cost than to transport to the hilly or mountainous areas, so they have no domestic food supply. Government of Nepal, Ministry of Urban Development, Kathmandu Valley Development Authority (KVDA) and Ministry of Physical Infrastructure and Transporting collaborate with JICA and they are in the processing the project for The Project on Urban Transport Improvement for Kathmandu Valley. Kathmandu is the largest city in Nepal and it is surrounded by five mountains. This project was made to establish a comprehensive Urban Transport Master Plan for Kathmandu Valley, and it is aimed at the development of three main functions, 'Proposed Urban Structure concept for Kathmandu Valley. [Proposal for the development of new urban centres with medium and high density, connected to the Central Business District by public transport system]' 'Transport Network. [Development of Inner Ring Road; Promotion of mass rapid transit and non-motorized transport in less risk-sensitive areas]' and 'Emergency Road Network to perform smooth emergency transport in case of disaster.' By implementing this project also in mountainous areas, the possibilities of traffic will spread and many surplus foods are transported.

Defective soil also causes food shortages. Soil fertility has very important for people to sustain increasing agricultural production. According to Horticulture Centre; Nawalpul, Sarlahi, the main reason causing agricultural productivity to decrease is the fertility decline. Drying up of soil nutrients is a critical constraint to food production of inhabitants in the mountain and hilly area. Then, what is needed to solve this problem is effective microorganisms and organic manure. The usage of organic manure increases the water holding capacity of sandy soils, prompt the tilth of clayey soils, easy drainage, and requires less water for crops. Effective microorganisms also can be used in increasing the production capability of agricultural crops. For example, blue-green algae, Azolla, Rhizobium, azotobacter. Furthermore, it is having known effective microorganisms increase the microbial diversity of soil and plants, and they are helping to increase the soil quality and quantity of production. In fact, effective microorganisms raised 15-20% rice yield and wheat yield by 38% in 1998 and 1999. These biofertilizers are cheap and pollution free so it is possible to buy them for even poor people and can be the biggest solution.

Finally, education can help people not only from food shortages but also from fundamental poverty. According to Asian Development Bank, 31% of the population in Nepal doing agriculture and households that can secure only about six months of food per year from agricultural crops and day labour is mostly protecting from starving by borrowing money from a neighbour or working away from home. Some poor families in Nepal have to let their children work rather than go to school. In this way, the poverty cycle is reused in the next generation because they don't receive an education and it is difficult to get a job. The United Nations Educational, Scientific and Cultural Organization provides support people who can't go to a school called Community learning centre. They try to make an opportunity to go to school for poor people, teach reading and writing and also technical training to get a stable income. Not only children but also adults can go to school. People might be able to earn more money and get enough food because they gain various skills at school.

IV

In conclusion, the food insecurity in hilly and mountain areas in Nepal have mainly caused by lack of infrastructure, infrastructure development, low-quality soil, lack of education, and food spill overseas. However, mountainous areas are difficult to get help from government and institutions for geographical reasons. So the best solution is that the residents themselves cooperate and advance agriculture. In poor families, children often don't go to school to help with work. I think that children need to receive education in order to organize the residents. Getting education leads to thinking about how to live effectively on their own, so I think that receiving it is one means of problem-solving. It is necessary to think about how to let such children go to school. This problem is blocking the development of Nepal. After all, the nation couldn't be better, if its people are poor.

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Food Shortage May Stop the Number of People Increasing at 11 Billion

Seiya Nishimura

Nowadays, according to the 2015 Joint Statistical Meetings in Seattle, by 2100, exploding population all over the world will be put a end period at 11 billion. Some people said that the shortage of food will be main reason for it. Then I would agree that the amount of food will be main reason for population stopping. However, it is not only that but also there are other factors why it will be happened. The shortage of the food is serious problems as one factor to reduce the population. This anxiety factor has to be solved urgently due to indisputable encounter with humans. The U.N. even says that the demand of the food will be increased by 60% and naturally speaking this cause the price increasing of the food at the same time. In this essay, I will write how to stop/ prevent the shortage of the food urgently including the view of long term, I have three solutions.

I

One of the reason why the population all over the world will be stopped exploding at 11 billion would be because the scale on the earth is limited compared to unlimitable producing of human. How large the earth is approx 510,100,000 km² and not everything can be available for inhabitants, other words, we have to live in limited area. We have to produce the food to live, also some areas people nowadays live are not adopted for it, even now millions people are dying from starving, African land is dried and few raining. Thus, although now the number of people are increasing but without support, it would be difficult to live sustainably. Adding to this, every year, people selecting world heritage to save permanently. The area human can live is shrinking. In addition, nowadays, 54% of population in the world live in urban areas and is expected to increase 66% by 2050. The capacity of urban areas is not prepared for more people even now.

Secondly, One of the reason why the population all over the world will be stopped exploding at 11 billion is because it is not needed so many people in the world for the country thus the government or country would try to limit the number of people in their countries. Countries like China has ever limited population of its country. It is not hard to do that. In addition, the more people in its country will cause many problems not only food however, like employment, governing citizens as well.

Additionally, One of the reason why the population all over the world will be stopped exploding at 11 billion is because it is likely to occur the war to solve the problem that is the shortage of food against countries. Historically, Famine happened many times and it is kind of traditional human behaviour continued from 441 BC. Ex in Ancient Rome. Because of the technology innovation, more people are likely to die. The way to finish its famine is to get food thus once a country dominate, losers are less likely to get food.

The shortage of the food will be occurred from all countries together. Not like only one country happened because that can be supported by others as helping. In this section, to think about the effect of the shortage of the food by the particular country, China, Russia and North Korea. Firstly, China's effect against the shortage of the food. It is based of the communism. Everyone has to obey for the country. Also, this country is highlighted at the difference of the income between farming area and urbans. The shortage of the food will reverse its difference from urbans' winning. Money becomes the paper , which doesn't mean anything and no value. Farmers can make their foods by their own but people in urban cannot. The Nnext, the shortage of the food for Russia seems to be no problems because society's form is different from others, socialism. Limiter cropping is built in this country and strong for seasonal effect because of storing of the foods is accounted for 2,28 trillion. Even it is happened, it can use its storing and keep themselves up.

II

Firstly, getting a foothold GM (genetic modification) technology is one of the way for prevention against the shortage of the food. But it is unfortunately a fact that GM is not well- known whether such foods are better or worse for one's health and it pointed half of Americans not knowing its risks. However, considering expansion of foods used by GM technology will work for the shortage of the food. Because GM can customise crops' DNA so that make themselves stronger for particular situations such as farming in the desert.

Having regulations for Getting foods will work against the shortage of the food around the world. The population will be increased by 11 billion 50 years later statistics from U.N.. Then it is likely to happen the war for getting the foods around the world. Especially, in the fields of Africa, it is excessive to occur hard domination as the explosion of the population is inevitable. But, this dystopia already started in the fishing industries. Excessive cropping crabs reached to extinction as howstaffworks.com indicated. So, if having rules for cropping foods, it can retain the number of species and will keep catches, too.

Replacing to eat insect meats from eating cows will achieve to solve the shortage of the food. Cows are emitting carbon dioxide 10 times more than human does in their life times. A cow does on overage release between 70 and 120 kg of Methane per year. Methane is a greenhouse gas like carbon dioxide (CO₂). But the negative effect on the climate of Methane is 23 times higher than the effect of CO₂. Cattle-breeding is taking a major factor for these greenhouse gas emissions according to FAO. In addition, low protein and costing so much water to bring up. Water Footprint for cow accounts for 15 400 m³ /ton as a global average. However, if replacing it to insect, high protein can be consumed in and less water, carbon dioxide and faster process to grow. We humans have to think of eating insects.

Judging from history, it is known that the impact of world affair is different behind the form of the society. Taking the example, when Lehman shock has happened, Russia did not get any impacts on it due to socialism while the U.S. assumed unfixable impact because they were codifying capitalism. Following this theory, I suggest the impact of the shortage will be varied by the social forms. Here I have three big countries to see the expected effect.

Firstly, the country with communism, China is specially featured by having only 0.2 acres to devote to feeding each citizens while the western diet typically demands about one acre per person, although the country dominated 50% of beef consuming in the world. That means that China is being tired of having that numerous number of people but, it is likely to increase its number of people in the future. China is now losing cropland due to the rapid rate of industrialisation. There are expected to have two choices: limiting the number of people or expanding food connection towards developing countries in the name of "one belt one road". Communism is codified as distributing capital equally to all citizens so limiting the number of people are parts of maximising the profit and avoiding the risk so this action will be easy to operate and about food connection, China is now helping South Africa excessively. That budget used towards Kenya is over 300 billion dollars. Because Those who are supported has owe China. When China suffers from the shortage of the food, they have to preferentially help China.

III

Concerning about Russia, it still has really big power and it will continue as long as Putin exists. Additionally, you would not have to care about poverty from the food if you were a citizen of Russia. Why is because of strong structure coming from socialism. The socialism is known as the companion of capitalism and overcome the weakness of it. E

It is not very likely that the amount of food will be main reason for population stopping because there are many other problems in the world such as including pollution, a scarcity of resources, unemployment, poverty, crime and political unrest or it could even more. Thus, I don't think circumstance is keeping still in the future and some organisations would do action. In addition, we cannot see what is going to be happened about technology. The technology has made our life much easier but the threats too. They would even be foe in the future.

The Aesthetics of Food Takuto Matsubayashi

"We eat first with our eyes", this old idea may be true. Would it actually make more delicious if food will be offered in artistic form? The answer is Yes, according to a study which was called "A taste of Kandinsky: assessing the influence of the artistic visual presentation of food on the dining experience". In this study, using the same ingredients, salads made based on Kandinsky's painting #201 who is called "father of abstract painting", salads ordered as usual, and arranged side by side, these three types of salads were prepared. After that, had 30 men and women who were 18 to 58 years old ate it and evaluated its taste. There were five perspectives to evaluate by a numerical value which were complexity, liking, artistically arrangement, tastiness, and willingness to pay. As a result, art inspired salad had a significant difference compared to the other two salads. Also, there are some ways to make food better through sight. Michael Crane who is corporate executive chef of ARAMARK said that "you treat the plate as one unified 'canvas', keeping in mind the balance of the composition, the colors, the flow, the patterns, or lines". Based on these, the sight is used for tasting the food, so visual of food is necessary to the art of food.

I

The fragrance that human feels is divided into two forms from how they feel. One of them is a nose incense also called "Orthonasal Aroma" that people can sniff food with their nose tip. This is the meaning of fragrance which people think usual. The other one is a retronasal incense also called "Retronasal Aroma" that is felt as fragrant ingredients pass through the nose from the back of the throat when chewing the food in its mouth and some people say "return incense. When pinching your nose and eating food, you will not taste the food it because the fragrance ingredients will not come out of your nose. This fragrance is not surprisingly known because you feel the real taste with the tongue and feel this mouth incense by the nose at the same time when putting food in your mouth, so it got mixed up and people often say "it tastes like ~" because the taste and fragrance are together, so it is said that it is "taste" for a long custom according to Professor Matsuishi. And people can feel fragrance through nose. For example, the reason why stretch out for a fragrant sweet carelessly is that it has an appetizing flavor. However, can't eat a delicious meal when you catch a cold and stuffy nose. Also, the fragrance is an important factor for obtaining information from food. For instance, people will not eat that food if they have an unpleasant smell from food. On the contrary, if a favorable scent occurs, it feels tasty. Furthermore, if you can judge the type of food with the smell when you put it in your mouth, its taste will be further enhanced. In this way, it is the flavor that gives food an important aroma and savor.

Taste of food is the most effective and difficult point because people often judge the only taste of food and they also have their own a fixed idea about taste. For example, I must imagine the taste of curry when I try to make it, so I need that I have done an individual experience with curry and it might be sense of taste. Confusingly, people have a different favorable taste from each of them, for instance, someone who has a sweet tooth, love to drink, prefer to salty, and so on. Based on these, I think the way to make a dish which is accepted generally is nearly impossible but almost of all art doesn't be preferred by everyone, so need to brush up own taste as an artist. Therefore, I'm interested in "Gastronomy" which is examining relation between culture and cuisine. Joel Robuchon who is one of world-famous chef has some restaurant worldwide which is one of gastronomy restaurant. His dish has continued to fascinate the world and he expressed that cooking is an art starts with love. The first things to think when we cook is a figure that the customer will eat really deliciously and happily. As with all arts moving people's hearts such as paintings and films, cooking also entails strictness in the process of creation. Based on these, I mention that thinking about the customer like what is her/his favorite make taste's form easily.

II

Art can be defined as many different things. But would food fit into any of those definitions? Fabio Parasecoli presents his interesting opinions on the subject in his article, "Is Food Art?". He presents the two aspects that could connect food and art together. He first shows that innovation and creativity are attributes that chefs bring to the world of art, and second, is that these chefs within the media are described as "avant-garde". Within the article, Parasecoli describes the further risk and reward to this new art form. To help further the career or new artist, they rely on donors and investors. Rather than painting on a canvas or sculpting a structure, a chef creates art via food instead. To be a successful food artist, you need originality and innovation, something that hasn't been done before. A chef can go beyond a simple cook by handcrafting exquisite dishes to use the haute cuisine regime. These high-class chefs are "expected to offer patrons and critics dishes and menus that stimulate and surprise". To remain within the public eye, they must keep innovating new recipes, trying new flavors with successful and organizing new designs. They become a true artist by creating new cutting edge dishes and not following others. Just as other sorts of artists, a chef sets out to appeal to his audiences' aesthetic reaction, particularly smell and taste. Considering whether or not these haute cuisine chefs create distinguished works of art, Elizabeth Telfer who is the author of "Food as Art" defines a work of

art as “a thing intended or used wholly or largely for aesthetic consideration”. This higher-class food, cuisine rather, is meant to be appreciated and thought about before eaten. This type of food can classify a work of art, but not all food. Not all food is meant to be savored in this way.

Comparing Telfer’s idea to Parasecoli’s, it seems they both agree that food can be art, and chefs are indeed artists. In addition, Telfer explains that “art is an original creation, whereas craft is carrying out an instruction”. Furthermore, a chef who creates his own new and innovative meal is indeed an artist, not just a craftsman. The second Parasecoli’s approach to food as art is in regards to the term *avant-garde*. “An intelligentsia that develops new or experimental concepts especially in the arts” can explain the term *avant-garde*. By this definition, a chef who is an artist by the description above is also an *avant-garde* in the media. Food as an art is a relatively new and controversial topic. Although Telfer agrees that food can be art, she struggles with dishes of food being works of art. Perhaps in this aspect, Parasecoli and Telfer disagree. “How can there be works of art which are destroyed by the very active, eating, which is necessary for contemplating them?”. Parasecoli can defend and say the chefs are appealing to the aesthetic appeal of their people and are embarking on a new journey, to make food a work of art. This is an experimental concept as of yet. According to Parasecoli, chefs actually make it a point to tell the world their intention is to become an artist, to be *avant-garde*. They post to websites, interviews, and write their own story via cookbooks to compare to previous declarations of an *avant-garde*. The idea of *haute cuisine* is comparable to previous movements of the past that are already “historically affirmed”.

Finally, Parasecoli explains bluntly that “young gifted chefs are often not too worried whether “narrow-minded customers” appreciate their work.” In other words, they know what they are setting out to do and don’t necessarily care if every person accepts their journey. Perhaps the only people they do care about, are the investors who help fund their dream. You can say this about any type of new artist, actor, vocalist etc. It is a risk to create new art forms, but Telfer and Parasecoli are both believers in the concept of food as art. Parasecoli’s article to exclaim food is an art form, takes an approach more towards the innovation and creativity behind it to define the artist whereas Telfer approaches it as the finished product can be the art form. Regardless, these two authors agree generally that yes, food is potentially art.

III

Food pictures can also modify the process of hedonic taste evaluation. By means of electro-encephalography, Ohla, Toepel, Le Coutre, and Hudry showed that high calorie food images enhance the hedonic evaluation of a subsequently-presented hedonically neutral electric taste produced by a small current that was applied to the tongue. At the behavioural level, the participants rated the electrical taste as significantly more pleasant after viewing high-calorie food images than after viewing the low-calorie food images. At the cerebral level, high-calorie food images induced an early modulation of taste-evoked neural activity in the insula/frontal operculum within 100 ms after taste onset. Such a pattern of results clearly suggests that visual information concerning the energy-content of a food modulates taste representations during the early level of stimulus encoding in the primary taste areas. The later differences of activation that were seen in the OFC, and which were positively correlated with the hedonic evaluation of the taste, were followed by subsequent modulations of activation in the insula/FOP at a latency of around 360 ms. This late activation suggests an interoceptive hedonic re-evaluation of the taste based on the perceived energy-content of the food images.

As we saw earlier, ‘visual hunger’ can be defined as the natural desire, or urge, to see food images and the subsequent array of neural, physiological, and behavioural responses that result from an individual’s exposure to food images – typically implying unisensory (visual) stimulation in the absence of any actual food. The existence of this phenomenon could be put down as an early Pleistocene adaptation to the comfort of seeing food, meaning to early humans having enough energy to survive for a few more days. The rise of painting and the visual arts made it possible to depict food without any actually being present. In recent times, the appearance of print, and thereafter digital screens – whose presence in the daily lives of modern humans is seeing an exponential growth – has rendered the presence of virtual food ubiquitous. As advanced in this article, the regular exposure to virtual foods might well be exacerbating our physiological hunger more often than needed, due to the array of neural, physiological, and behavioural responses linked to seeing food. Given the fact that a growing proportion of the world’s population lives in obesogenic environments, this doesn’t seem to be helping in solving certain costly food-related diseases that are of concern to certain influential organizations and public policy makers, not to mention the environmental consequences related to the growing production of such foods. We believe that discussing and understanding the importance of the unimodal visual presentation of food in today’s environment is important in terms of orienting populations towards more appropriate food behaviours and choices, a subject of great importance given the fact that some of the biggest challenges facing humankind are related to food consumption and food systems – health, excessive meat-consumption, the use of natural resources, water management, land use – to name just a few.

In society at large, there is a growing awareness of just how much people like to take pictures of the food that they have ordered in restaurants, and chefs wanting to design food in most pleasing manner. Increasingly, it would appear that people are spending more time looking at virtual images of appetizing foods, and paying less attention to the actual foods being consumed (see Fig. 3). Worse still, many of us eat while mindlessly watching screens (TV, or smartphone), failing to focus our attention on the flavour experience which might be the very source of lower satiety, and higher-calorie food intake: The pleasure of seeing virtual food (the hunger for images, or 'digital grazing') while eating has in some sense superseded the pleasure of seeing the real thing. And while some might be tempted to see this as the fault of industry/marketers, it is important to remember, given the growing popularity of consumers taking pictures of food,¹⁷ that the problem here would appear to be, at least partly, self-inflicted.

Education in Japan Sachi Fukuda

The biggest problem in Japanese education is that the idea for education is old. As the quality of education in the world is getting higher, Japan has to improve its quality of education by piggybacking on it. In Japan, as of April 1st of that year, kids reaching 6 years of age will enter the elementary school. The grade begins in April and the ends in March. The elementary school has a six-year system, the junior high has a three-year system, and for the Japanese citizens, this nine years is compulsory education. However, for foreigners it is not an obligation, but if you wish, you can attend local public and junior high school in the area. After graduating from junior high school, you can go on to senior high school or university by hope and you can get a job. There are elementary schools, junior high schools, senior high schools, technical colleges, junior colleges, universities, graduate schools, both national, public (municipal), and private schools. Also there are special schools where there are illnesses or body disorders that seem to be difficult to attend general school. The modern education system in Japan started in 1872 and has a history of more than 100 years, and in 1952 the education system reached a major reform after today. Upper secondary schools have advanced to higher secondary schools as senior high schools attendance rates exceed 97%, and the rate of advancement to universities and junior colleges also exceeds 50% in 2007. Higher education in Japan consists of universities, junior colleges, technical schools, vocational schools. The entrance qualifications of universities and junior colleges are basically to have completed primary and secondary education for 12 years. In addition, entrance qualifications are also applied to applicants who wish to enter from abroad, such as "those who completed a 12 year regular school education in a foreign country". The university is the center of academy, is a higher education institution that teaches and studies specialized academic arts as well as learning a wide range of cultures. Senior high school graduates or those who are recognized as having academic ability equal to or higher than that can enter the university. Undergraduate and other education and research organizations are set up in the university, and the undergraduate education has a term of 4 years (medical, dentistry, pharmaceutical science courses that aim to cultivate clinical practical abilities and veterinarians the course of study is 6 years). University undergraduate graduates are awarded a bachelor's degree. Many universities have graduate schools that conduct higher education and research. A graduate school may enroll as a graduate of a university or one recognized as having academic ability equal to or higher than that. The graduate school has a master's program with a standard course of study of 2 years and a doctoral course with a standard studying term of 5 years. The latter is usually divided into the first year course equivalent to the master's program and the second year course of the third year. Medicine, dentistry, pharmacy studies that aim to cultivate clinical, practical abilities, and veterinary medicine is only a four year doctoral course. A master's degree or doctor's degree is awarded to those who complete each course. There are junior colleges in Japan. Junior college is a higher education institution whose main purpose is to teach specialized curricula and to cultivate necessary skills for occupation or real life. Junior college entrance qualifications are the same as university qualifications. The term of study is 2 years or 3 years. In short term universities, departments are placed by fields to be learned. The technical college is an educational institution with a 5 year or 5 year and half of study where junior high school graduates can advance. The technical college deeply profess professional curricula and cultivates the necessary skills for occupation. In this essay, I will talk about comparison between Japan and world education system, and problem of education in Japan, and how to solve that problem.

I

First, I am going to talk about comparing between Japan and world education system. There are cases where the overseas educational system differs greatly from Japan in some cases, such as Finland internationally highly acclaimed, while others like the United States incorporate the grading system based on the idea of individualism. Educational circumstances in Finland, which is always highly valued at the OECD student's programme for international Student Assessment (PISA), is often discussed as an ideal way to be a model in Japan. As a characteristic of Finland's education, the philosophy is "equality of opportunity" and "respect for autonomy" and the care of individual education for students with lower grades is substantial. And, it is also characterized by a retirement age system at the compulsory education stage. Regardless of the income of parents, it can be said that it is an educational system that does not create a fallout by equally giving all children the opportunity to receive education and dealing with each individual learning speed in a fine grained manner. In addition, the Internet environment is enriched, the groundwork for gamification and reversal education, which has attracted attention in recent years, is being arranged. Educational circumstances in the United States are also often compared in comparison with Japanese educational circumstances. What is distinctive in American education is that there are retired people in compulsory education as well as in Finland. On the other hand, because there is no age restriction on promotion, some students are studying in so called "skip the class". Depending on the degree of comprehension of each individual, there is possibility that the lessons that are received at the same age may differ. This area around this is big difference with Japanese education,

which regards group harmony as good or bad as "side by side". It can be said that the spirit of individualism is respected in the education system in the United States. Also, in Japan it is possible to mention that the "cram school" where many students go through is not very popular, and the homework from the school is increasing accordingly. Besides this, it is also characterized in that from the stage of senior high school, you can choose lessons from a great number of courses depending on student's interests, and desired paths. Let's talk about Chinese education. The system of 9 years of compulsory education is the same as in Japan, but the characteristic is the unified university unified entrance examination conducted at the university entrance examination. There is a center exam which all applicants who wish to go on to college in Japan all at once, but unlike the university entrance examination system in Japan, in China, the acceptance of the university is decided only by the result of this university unified university entrance examination. Since it is necessary for a candidate to decide which university to apply before taking the university unified entrance examination university, carefully choose an aspiring school according to his or her ability. In China, there are not a few parents who wish to enroll their children in upper secondary schools, which are said to be stricter than the military, in order to take a high score in this university unified university entrance examination which has a very important meaning. In recent years, universities that conduct unique examinations that are different from the unified university unified entrance examination are also being established, although it is a small part.

II

Second, I am going to write about what is problem of education in Japan. In this era of declining birthrate, many schools were consolidated and abolished nationwide, and the number of the teachers was considerably reduced. Therefore, it is said that students wishing to become a teachers are too much for demand. Nevertheless, on the field, the number of faculty members is small, it is considered to fail someday as it is. It is simply a financial problem. Along with the declining birthrate, the Ministry of Finance tried to reduce the budget for the Ministry of Education, based on the theory that "the number of children decreases, so that the number of teachers can be reduced by the same proportion". For the MEXT who thought that the number of children per teacher was too large in the days when there many children, this was unacceptable. It is because the Ministry of Education, Culture, Sports, Science, and Technology thought that it would be possible for a comprehensive education to be introduced through introduction of a small class number and education by level for children with level differences unless the number of children decreased. The budget of the country concerning education is decreased every year, the national public only comes with the budget according to the number of children, private school has been decreasing and subsidizing more and more. In other words, it has become a situation inevitable to reduce teachers to adopt. Another thing that can not be overlooked is not keeping up with globalization. Recently noticed the importance of English education in Japan and started English education from primary school. However, in the world, English education has been started from a long time ago and comparing it within the same Asia, the speed of education in Japan is behind the world. The number of countries now beginning to emphasize not only English education but also Chinese language education in the world is increasing. That is because China's power is getting bigger these days. Since English is common language in the world, there is also a part gradually becoming obvious that is possible to speak English. However, the fact that China has gained power has been recently talked about, and as a result there are an increasing number of countries that have incorporated Chinese into education.

III

Finally, I am going to tell you about how to solve these problems. The progress of declining birthrate is complicated and various factors such as progress of unmarried / late married, rise of first child birth age, long-time labor, isolation feeling during child rearing and a heavy feeling of burden are complicatedly intertwined and finely detailed. It is important to comprehensively promote countermeasures against declining birthrate. In addition to the enhancement of support by the administration, awareness of cherishing marriage, pregnancy, child care and parenting is deeply shared among society as a whole, and appearance as a behavior makes young people marry, pregnancy, giving birth, child rearing more positive. As shown in Fig. For the realization of a warm society for marriage, pregnancy, children and child rearing, the Cabinet Office is working on comprehensive countermeasures against declining birthrate. In Japan, five years from now, we are promoting male vacation acquisition to "male spouse's immediate vacation acquisition rate of 80%". Immediately after my wife's birth, a man gets a vacation and spends time with his family, realizing that he is a father, deepening his connection with his family, triggering childcare and domestic affairs, and setting his way of working and living and it is to make opportunities to review.

IV

In conclusion, I think that it is necessary for all members to unite and cooperate with each other in Japan because even if only individuals try to tackle problem solving, there is a limit to the extent that can be solved, but if

everyone including the government tries to solve the problem, it will solve the problem of education in Japan more quickly.

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Fast Food and Health

Mihiro Tamura

In the modern society of Japan where globalization advances, Westernization of food and industrialization are accelerating. Changes in diet and dietary habits not only influence health but also influence people's productivity and eventually the economic development of the country. In addition, such dietary changes are common in students living alone. In the United States, food-related chronic diseases and lifestyle-related diseases are the main cause of death (Mokdad et al., 2000). This has a big influence on learning efforts. In this essay, I will illustrate about pros and cons, compare and contrast and solution of fast food.

I

First, I will explain pros and cons. Positive points of fast food is fast, cheap and delicious. You can save time. Most meals served at fast food places are served in just a few minutes. Even restaurants that provide these quick services rarely have to wait for orders. That means that you can get out in 30 minutes in many places. Saving time may be over an hour compared to the time it takes to prepare something at a sitting restaurant or home. It offers consistency. If you limit your menu options, the price is very attractive. When eating at McDonald's, the average price is about 650 yen. This is one of the major factors that students depend on fast food.

However, there are a lot of negative points. A good meal seems cost-effective, but in fact it can not be compared with homemade meals. It is cheap compared to eating out at other restaurants, but actually it is higher to buy fast food compared to self-cooking. It is a premise that fast food is not healthy. Healthy choices in fast food restaurants are not necessarily so healthy. ABC News compares salads served at McDonald's and hamburgers on the menu. If you eat chicken salad with Caesar dressing and crouton, you will ingest 390 kilocalories and over 1300 mg of sodium. Compared to McDonald's double hamburger, only 65 kilocalories changes.

II

Next, I will compare and contrast fast food with healthy food. Fast food tends to contain a lot of fat sugar, these increase calories. It increases the risk of obesity. Meanwhile, health foods such as fruits, vegetables, whole grains, low-fat dairy products tend to have lower energy density. Low energy density diet helps to lose weight. Some of the problem with fast food is that it contains a large amount of fat and sugar, so it increases the calories involved. This means fast food is relatively nutritious. The higher the frequency of eating fast food, the less intake of micronutrients was found. Healthy foods help you to increase your diet's nutrition, or nutrition, and improve your nutritional intake. Eating healthy foods reduces the risk of obesity, heart disease, diabetes and diseases including cancer, but fast food brings the opposite effect. We found that fast food intake increased the risk of metabolic syndrome. It increases the chances of becoming heart disease or diabetes.

Compare prices . Fast food may be cheaper than a healthy meal, but you can plan a healthy meal including low-cost foods that save money compared to fast food or convenience food based meals . In this study, we found that healthy meals based on generic, frozen, bulk whole-grain foods are actually cheaper than purchasing fast food for all meals. Dairy products and vegetables are the most expensive item of healthy diet, followed by meat and fruits.

III

Next I will illustrate solution of fast food. How can we take action. Find materials with good quality. Americans spend more on meals than ever. And they demand higher quality fast food and more diversity than just hamburgers and fried potatoes. In fact, this survey showed that the quality of Americans' decision to eat out does convenience. While the healthy dietary trend has increased in recent years, the US obesity rate has not yet declined. Consumers who are eating at a restaurant that is recognized as "healthy" will average 151 calories less than when they are eating at a fast food restaurant that is recognized as "unhealthy". But it is quite the opposite, they discovered that additional drinks, side dishes, desserts contain up to 131% more calories compared to the case where the main entrance is sold as "healthy" did. The essential thing is that you should not eat too much, even if you eat at a healthier fast-food restaurant.

Customize your order. One of the most powerful things you can do to improve the quality of your fast food meal is to avoid high calorie drinks. For drinks, choose ice tea without water or sweetness. Shakes and carbonated drinks contain a lot of sugar. Several studies have shown that excessive sugars in diet contribute to increased risk of developing heart disease and diabetes, weight gain, malnutrition. One thing you can do is to skip the fat add-on. Restrict other high fat, high calorie ingredients such as cheese and bacon. And if you have the option to add vegetables, please do so. Shake off the salt. The possibility of consuming more than you think is very high. The recommended

sodium intake for adults is 2,400 milligrams per day, which seems to be quite a lot until you notice how much hidden salt you have in the food you eat, especially fast food. A large hamburger in a fast food restaurant contains 1,200 mg sodium. There are options to simply reduce the size or ask for things with a lot of vegetables.

A lot of healthy options are prepared. Modern fast food is not just hamburgers or fries. You can find it in various chains in the world. There are several healthy fast food meals. For Chick-fil-A, grilled chicken wrap can be offered at 340 calories. Some of the salads provided by Wendy's are less than 400 calories. Some items of Taco Bell have less than 350 calories. Even if you want a hamburger, Shake Shack offers a single hamburger with 360 calories and just 460 mg of sodium.

IV

In conclusion, Fast food is fast, cheap and delicious, but because it will damage health, it should not be eaten habitually. Compared with healthy foods, risks to lifestyle diseases and their dependence may be high. To enjoy such a fast food happily and safely, there are options to choose restaurants that offer dishes made from high quality materials, customize orders, and so on. Avoid high-calorie drinks, avoid adding cheese and bacon, increase vegetables, reduce salt, etc., it becomes possible to be healthier to taste. Also, there are lots of healthy options for fast food. It is a fast food restaurant that offers healthy things such as chicken wraps and salads, as well as high calorie items. By using them, it is possible to use cheap fast food which is recognized as unhealthy.

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Global Issues from Unexpected Places

Riina Oe

As SDGs has been set up, we have many problems to solve, such as climate change, poverty and food waste. In fact, according to WFP, “In a world where we produce enough food to feed everyone, 821 million people – one in nine – still go to bed on an empty stomach each night.” Another fact of global issues is that “In 2016, the earth’s surface temperature was around 0.94 Celsius degrees warmer than the 20th century average. In the last few years, global temperatures have been consistently among the hottest on record.” according to Statista. People do not really pay attention to those issues because they are not involved directly, and some do not get affected by them. However, global issues have to be solved because they have negative effects on not only humans but also bug nature, animals, and our beautiful earth. Although there are many places where those problems occur from, we usually focus on where it is directly involved, but it happens from an unexpected place, and we scarcely recognize them. I focus on wedding industry this time because in fact, about 90% of people answered that wedding ceremony is fun and happy for the question that ask people what do they imagine when they hear the word of “wedding”, according to Mynavi, and it is thought as the things that is far away from the global issues. It actually bring lots of happiness to people, but it also bring negative impact on our beautiful earth. In this essay, I would like to explain three bad effects and clarify the causes of negative impact from wedding industry to make people being aware of how we are involved with world issues. After that I would like to explain some new ideas of how to make more eco-friendly wedding in order to tell people what we could do to solve the global issues in wedding.

I

The one of bad effects of the wedding industry is food waste. According to the Ministry of Agriculture, Forestry and Fisheries, approximately 23% of the food provided at the hotel's wedding reception is discarded. In actuality, Japan’s food self-sufficiency rate is only 38% while the self-sufficiency rate of Amelia, France etc. exceeds 100%, according to the Ministry of Agriculture, Forestry and Fisheries. Despite its low self-sufficiency rate, we discard large amount of food. We could say that it is food import for disposal. In addition, not only in Japan but also other countries’ wedding have food waste issues. For example, according to GUardian couples needlessly waste a tenth of all their wedding food in England.

The other bad fact is that garbage from wedding kills animals around us. At wedding ceremonies in recent years the popularity of "balloon release" which emits a large quantity of balloons in the sky has been rising because it is really good to take pictures and there is a hope that the happiness of the couples will reach the heaven. However, it badly affects to the animals in some ways. There is a fact that sea turtles eat the floating trash mistakenly as a jellyfish which is a feed for them. Actually, it is reported by one green planet that approximately 50% of the cause of death of sea turtle is that they eat plastics in the ocean by mistaking. Also, birds and dolphins tend to be attracted to colorful things, and they misrecognize garbages as baits. In addition, once the balloons are launched to the sky, the balloons and the ribbon attached to the balloons falls to the ground. Then a lot of birds and animals are tangled with it and they may not be able to move because of it.

The third effects that brought by wedding industry is garbage. Since wedding reception is special every time and different each time, it is rare that the accessories etc are reused. According to BOTANICAL PAPERWORKS, about 400 to 600 lbs of garbage are produced in wedding ceremonies every year. Also based on an estimated 2.3 million of weddings are held in the U.S. per a year. This means more than 1 billion tons of garbage are produced per a year in U.S. As example of garbage, decoration such as balloon and flowers, and Invitations are never able to reuse. In addition, according to the guardian, over 80% of flower that are used in wedding industry in British are imported. For that reason, the carbon footprint associated with air freighting flowers is being a big problem because it promotes the global warming. Also, consumers never eat them, so people do not care about if huge amount of pesticides and fungicides were used to grow flowers up. These chemicals are not only be harmful to people, but also to the environment as well.

II

One of the causes of food waste in wedding ceremonies is hospitality. The host provides foods that amount is two guests' dishes to one guest because there is an idea in Japan that it is hospitality to provide dishes in an amount that people cannot finish eating up. Also, there are cases where the cuisine at the wedding reception is made into a buffet style. It seems like there is less waste than dishes distributed to each one, however waiting staff refill the foods one after another to maintain the situation that you can eat fresh foods without waiting. However that causes food waste problem.

The cause of animal killing by wedding things is misunderstanding information. These days the problems of animal killing by plastics or other garbage have been spread all over the world and people at least worry about if their balloon release would bring bad effects to the environment. However, Japan balloon association officially allow to release bunch of balloons. According to Japan Balloon Association, they say that after the balloon is launched into the sky, it bursts in the air, and the fragments which have become smaller then fall to the ground. Since animals sometimes eat it is excreted, there is no health problem at all. As well as no environmental problem because the rubber balloon will biodegrade soon and return to the earth. In Japan, there are many wedding companies that encourage balloon release based on this. On the other hand, various reports on balloon release are released in the United States, the United Kingdom. Among them, it is stated that there is a possibility wildlife may mistakenly take rubber balloon as their food and swallow before it is decomposed. Although natural rubber is decomposed spontaneously, microorganisms in the soil and temperatures which are necessary for decomposition of biodegradable plastics are not in the sea. It also does not hit the light which is needed for Photodegradation and thermal oxidative decomposition. Therefore, it takes a long time for rubber to decompose in the sea, and there is a high possibility that marine animals eat before decomposition. According to Ocean Conservancy, 1.2 million balloon waste is collected during the past 25 years in the beach cleaning volunteer project which is done around the world, and this figure is about 1% of marine waste. Percentage of occupation may be small but it is true that a sea turtles eat plastic garbage by mistaking as their food.

Causes of tons of garbage in the wedding industry is that wedding is the biggest celebrations for the couples in their life. Almost all of people have wedding ceremony once in their life. Also, wedding is where couples convey their gratitude to their parents, friends or whoever help them. For that reasons people spend a large sum of their money on their wedding to make it memorable and precious for both couples and the guests. For examples, some people want to use flowers which is out of seasons or unable to glow up in some countries. Therefor they import that kind of flowers from distant country, which produce large amount of carbon dioxide to transport.

III

According to Infogram, the amount of food waste from each table in wedding is 3.8kg in average. In order to make it being less, there are some suggestion. First thing would be choosing in-season local and/or organic foods for your menu so that we can reduce emissions caused by transportation. Also it is important not to serve tons of food for guests, but it does not mean you should underfeed your wedding guests. It is necessary to think realistically about how much your guests will eat. In addition it is better to choose the other options than buffet style. The wedding staff comes to refill them and keep them looking fresh throughout the dinner. If you absolutely want to have buffet style, you should make it an option to send food home with guests. Set out takeaway boxes which is recyclable so that your guests can pack themselves the dinner's leftovers. Also too many dishes of similar flavours can lead to disappointment among the guests and it will cause wastage of food.

Many people want to Balloon Release at the wedding ceremony because it would be good to take photo, also people do that to pray. However it could kill animals around us. In order to prevent that problems, there are some alternate option. Instead of balloon people can have big babble. You can blow bubbles and let the breeze carry them skyward. Also, guests can blow bubbles as well and it is going to be unique and fun. Also, bubloon is getting popular lately. Bubloons are a hybrid between bubbles and balloons. It is kind of bubble but you can customize into whatever shape you desire.

Another problem from wedding is garbage. Paper products are huge part of any wedding. For example, it requires a lot of paper to make invites so it would be the good way to use electric as invites. It can not only reduce the paper waste but also it is easier to manage Host can send it for free as well. In addition, choosing a local florist and opting for native seasonal flowers is the best way to go green when it comes to floral arrangements. If people want to use non seasonal flowers, farmer have to use huge amount of pesticides and fungicides to grow them up. Also almost all of flower has a specific season that they can be growing. Flowers that is out of seasons are expensive but also it is not good for the our earth. Choosing non-local flowers means that you have to get them from faraway place which involves transportation (burning fossil fuels) and chemical fertilizers that can leach into the soil.

IV

In conclusion, wedding ceremony surprisingly has brought the bad effects, which are food waste, animal killing and garbage. The many problems we have today are developed in many places we have many ways to approach the problems and it is important for every person in this world to recognize what makes this world unsustainable. I think that people should know how much bad effects brought from their wedding in order to cause less bad effects. It is important for the wedding companies to produce wedding ceremony perfectly as customer's order. But also it is necessary to make a wedding ceremony that is not bad for our earth. I think that is what we can call actually

“happiness” In order to do it, both wedding companies and customers must know what bad effects they have and try best to make being less environmental problem. There are lot of options in wedding that can change unfriendly wedding to eco-friendly one. I did not know that wedding industry has so much bad effects for the environment before I searched. Also I have never thought before about solution that makes wedding ceremony better for the earth because I did not know the bad effects and issues. So I think that company or wedding planner have to mention to the customer that their wedding ceremony will bring some bad effects to the environment. Then they have to think about what they can do no to bring them with planner.

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Major Diseases in Canada Mio Kidoguchi

There are three major diseases in Japan, such as, cancer, cerebral, apoplexy, heart infraction. These diseases are connected to their eating habits. According to Japan's Ministry of Foreign Affairs, various factors, such as improvements in advances in medical technology, the upgrading of medical facilities, and the environment during the past 40 to 50 years, account for a drastic change in the nature of the population's illnesses. Tuberculosis is leading cause of death in 1950 at 146.2 deaths per 100,000 people, and also it has now fallen to less than 2 deaths per 100,000 people. Cerebrovascular diseases, the leading cause of death in the 1960 to 1970 period, decreased in the latter half of the 1970s. Since the 1980s, the leading cause of death has been cancer, which has been claiming an increasing number of victims every year. Surveys conducted by the Ministry of Health, Labour, and Welfare in 2010 reveal that cancer was the cause of 29.5 percent of all mortalities, followed by heart disease at 15.8 percent, cerebrovascular disease at 10.3 percent, and pneumonia at 9.9 percent. In this essay, I am going to illustrate two of major diseases in Canada, also the diseases' causes and solutions.

I

Firstly, I would like to talk about the major diseases in Canada. There are some major diseases in Canada, but it is not always same like Japanese three major diseases so I will be discussing the major diseases from this decade. One of the major diseases in Canada is cancer. Normally, human cells grow and divide to form new cells as the body needs them. When cells grow old or become damaged, they die, and new cells take their place. When cancer develops, however, this orderly process breaks down. As cells become more and more abnormal, old or damaged cells survive when they should die, and new cells form when they are not needed. These extra cells can divide without stopping and may form growths called tumors. An estimated 153,100 new cases of cancer and 70,400 deaths from cancer was occurred in Canada in 2006. The most frequently diagnosed cancer will continue to be breast cancer for women and prostate cancer for men. The leading cause of cancer death for both sexes continues to be lung cancer.

One of the other major diseases is heart disease. Heart disease is a general term used to refer to several diseases of the heart and blood vessels. In Canada, heart disease is the second leading cause of death and accounted for over 51,500 deaths in 2015. Heart disease is a condition in which the heart muscle is damaged or does not function properly. Plaque (composed of fat, cholesterol, calcium and other substances) builds up on the inner walls of coronary arteries and, over time, it can harden or rupture. As a result, the inside of the coronary arteries narrow and the flow of blood to the heart muscle is reduced. A blood clot can also form in a coronary artery when plaque ruptures. In such a case, the flow of blood to the heart muscle is blocked. Commonly known heart diseases include: ischemic heart disease (IHD), acute myocardial infarction (AMI) [also known as a heart attack], angina, cardiac arrhythmias, stroke, and heart failure. Heart disease symptoms may include chest pain, shortness of breath, palpitations, fatigue and sweating, among others.

Another major diseases in Canada would be diabetes. This is a lifelong condition where either the person's body does not produce enough insulin, or their body cannot use the insulin it produces. Their body needs insulin to change the sugar from food into energy. There are three main types of diabetes. The type 1 is where the body makes little or no insulin, type 2 is where the body makes insulin but cannot use it properly, and Gestational Diabetes, where the body is not able to properly use insulin during pregnancy. This type of diabetes goes away after the baby is born. Type 1 and type 2 bring patient to feel fatigue, frequent urination, unusual thirst, and unexplained weight loss. Nine out of ten people with diabetes have type 2 and it is one of the fastest growing diseases in Canada with more than 60,000 new cases yearly. In 1999, the Government of Canada pledged \$115 million over five years to develop a Canadian Diabetes Strategy, to enable Canadians to benefit more fully from the resources and expertise available across the country. In 2004, additional funding of \$30 million was provided for another year. Partners in this national initiative include the provinces and territories, non-government organizations, national health bodies and interest groups, and Aboriginal communities. The Canadian Diabetes Strategy has four major goals. First, develop a health-promotion, disease-prevention strategy for the entire population. Second, care for and treat First Nations people on-reserve and in Inuit communities. Third, provide culturally appropriate prevention, education, and lifestyle supports for all Aboriginal people. And fourth, improve national and regional information about diabetes and its complications.

II

Next, I am going to be illustrating the causes of the major diseases that I illustrated before. There are some known risk factors for cancer. Tobacco use is the cause of almost 30 percent of all fatal cancers in Canada and a major cause of lung cancer, one of the most preventable cancers. Also, poor diet (one with a high proportion of dietary fat)

causes about 20 percent of fatal cancers. Colon and prostate cancers are associated with diets high in fat. As the other risks include workplace hazards, family history, alcohol use, reproductive factors, sexual activity, sunlight, drugs, and ionizing radiation.

The causes of heart disease vary by type of heart disease. I will show the causes of four different types of heart diseases; cardiovascular disease, congenital heart defects, heart infection, and valvular heart disease. While cardiovascular disease can refer to different heart or blood vessel problems, the term is often used to mean damage to your heart or blood vessels by atherosclerosis, a buildup of fatty plaques in your arteries. Plaque buildup thickens and stiffens artery walls, which can inhibit blood flow through your arteries to your organs and tissues. Congenital heart defects usually develop while a baby is in the womb. Heart defects can develop as the heart develops, about a month after conception, changing the flow of blood in the heart. Some medical conditions, medications and genes may play a role in causing heart defects. A heart infection, such as endocarditis, is caused when an irritant, such as a bacterium, virus or chemical, reaches your heart muscle. The most common causes of heart infection include Bacteria, Viruses, and Parasites.

There is no single cause of type 2 diabetes but some factors can put you at greater risk, for instance, being age 40 or over, being overweight (especially with abdominal obesity), having a family member who has diabetes, having had gestational diabetes, having given birth to a baby that weighed more than 4 kg at birth, high blood pressure, high cholesterol or other fats in the blood or member of a high risk ethnic group. Aboriginal people have three to five times the risk of developing type 2 diabetes than other Canadians. Even Aboriginal children are now being diagnosed with type 2 diabetes, a condition that usually occurs in older adults. People of Hispanic, Asian, South Asian or African descent are also more at risk of developing type 2 diabetes.

III

Finally, I am going to show the solutions of the major diseases what I was discussing up to now. As the way to reduce the risks of cancer, people can do these things, such as, being smoke free, eating a healthy diet (eating plenty of fruits and vegetables, avoiding obesity, limiting processed meats, drinking alcohol only in moderation), maintaining a healthy weight and be physically active, protecting yourself from the sun so as to prevent to get skin cancer, and getting vaccinated. Especially, smoking has been linked to various types of cancer including cancer of the lung, mouth, throat, larynx, pancreas, bladder, cervix and kidney. Even if you don't use tobacco, exposure to secondhand smoke might increase your risk of lung cancer.

Certain types of heart disease, such as heart defects, can't be prevented. However, you can help prevent many other types of heart disease by making the same lifestyle changes that can improve your heart disease, for instance, being smoke free, staying physically active, maintaining a healthy weight, limiting alcohol use, controlling other health conditions, such as high blood pressure, high cholesterol and diabetes, eating a diet that's low in salt and saturated fat, reducing and managing stress, practicing good hygiene. Also, the early detection and management of medical conditions such as high blood pressure, diabetes and high cholesterol can help people reduce their risk of heart disease.

People can help prevent or postpone type 2 diabetes by losing and maintaining a modest amount of weight by following a reduced-calorie eating plan (limiting their intake of fat and sugar) and being physically active most days of the week. Furthermore, maintaining a normal blood pressure, limiting their alcohol intake, and quitting smoking help prevent type 2 diabetes as well. Too much alcohol could lead to weight gain and may increase your blood pressure and triglyceride levels, also, smokers are twice as likely to develop diabetes as non-smokers.

IV

In conclusion, I found there are a lot of major diseases in Canada and they are related to lots of things including eating habits and smoking. I was guessing that to decrease people who die with diseases is not easy, because there are so many patients who were not able to cure the diseases and died. This can be inferred it is demanding to get lower the number of patients of these diseases. After all the searching of these diseases, I assume it is impossible to make people's death from these diseases zero, but it could be possible to get lower, because the solutions that I mentioned before are not difficult. However, even though there are lots of easy ways to prevent these diseases, there are tons of people who were dead with them. That means, this is really tough to reduce the number of patient of these diseases.

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The Future of the Philippines with Population Growth

Ayuka Yamaguchi

Recently, the population of the Philippines is expanding rapidly. According to the latest census figures, the total population in Philippines peaked in 2016 at 103.9 million people. Looking back, in 1960, Philippines had a population of 26.3 million people. As the population increases by 1.6 million people every year and will gradually go up over the next thirty years, the situation of poverty that Philippines has is becoming more serious. We must know the shape of things to come. In this essay, I will describe the causes which promote the population growth in the Philippines and the effects which will be made by this overpopulation. In addition, I'd like to propose some solutions to create a better Philippine society.

I

First of all, I will explain three causes of population growth in Philippines, including poverty (economical reasons), high pregnancy rate, and culture, to determine if the negative effects can be avoided.

One of the biggest causes of population growth in Philippines relates to the poverty. Firstly, most people lack education. According to the Philippine Government, about 80% of the Filipinos live in the rural areas of the country because of economic barriers. Unfortunately most people do not have enough money for children to go to school. Therefore, people who don't know how to deal with pregnancy because most of them don't have opportunity to learn sex education. Furthermore, child labor is very common. Sometimes, parents hope to have a lot of children as a labor force to earn money. According to the Preliminary Results of the 2011 Survey on Children, 5.492 million children aged 5 to 17 years were working in 2011. Parents hope to have a lot of children to earn money.

The second cause of population growth in Philippines would be high pregnancy rate. One of the biggest reasons is that more people don't have access to contraceptives. According to the Washington Post, although anyone can buy contraceptives, many people who are poor cannot afford to buy them. Also, they don't know how to use them. Therefore, pregnancy rate increases. In addition, human trafficking is also big problem in the Philippines. According to the stories heard from local people in the Philippines, some people make their children for selling to others. Such people don't have any mind about their children to make money. Therefore, they try to have a lot of children as hard as they could.

The third major problem of population growth of Philippines is culture. One of the causes would be that there are so many people who follow their religion. According to the Washington Post, in the Philippines, four out of five of the country's 103.9 million people are Roman Catholic. In Roman Catholicism, it is thought that children are given by a god, so people have to avoid self abortion and contraception. Therefore, a lot of children are born whether the parents want to have children or not. Finally, extraordinary family love could be a big problem. According to the stories heard from local people in the Philippines, they think that family is the most important for them. At first glance, it seems like that this is usual for every country, but they have a particularly strong connection. For example, The majority of families are extended family, and each family has at least one child.

II

Next, I would like to illustrate three effects of the population growth of the Philippines, including society, environment, and poverty to determine what is the most likely effect.

One of the biggest effects of population growth in Philippines would be the society. Firstly, unemployment will increase. A lot of people lost their jobs caused by overpopulation. According to the Trading Economics, the unemployment rate in the Philippines went up to 5.0 percent in 2017 from 4.7 percent a year ago. In fact, the number of unemployed persons increased by 148 thousand to 2.19 million. Also, crime rate will increase. Increasing population is the root of crime rate in the city. When there are a lot of people in the same place, it is hard for the government to ensure the people's living conditions. According to the Philippine National Police, the number of crimes committed nationwide increased by about 46 percent during the first six months of 2015 as compared to the same period last year.

The second effects of population growth in Philippines will be in the environmental side. One of the biggest effects is that water will be polluted. Increased population has reduced the quality of water in the Philippines. According to government monitoring data, up to 58 percent of the groundwater was contaminated with coliform, and approximately one third of illnesses monitored during a five-year period were caused by waterborne sources. In fact, from my experience in Philippines, there were a lot of garbage in the river, and the appearance of the river was quite severe. Moreover, air will also be polluted. From my experience in Philippines, I saw a lot of cars and bikes on the

road. In addition, there were so many traffic congestions in the city. In fact, Metro Manila was named as having the "worst traffic on Earth," by Waze, a GPS-based navigation app. Population growth will mean increase in both the number of cars which give off toxic gasses. It is because slower moving traffic emits more pollution than when cars move at freeway speeds. Therefore, increased population is bad for air in Philippines.

The third major problem of population growth of Philippines is extension of poverty. One of the biggest effect would be that food scarcity. In the Philippines, some people cannot get enough food because of population growth. Food scarcity is the most frightening prospect facing the Philippines. In 2015, the Philippines had a Global Hunger Index of 20.1 on a scale between one and 100. This means that hunger is considered a 'serious' problem for the Philippines. Finally, lack of access to education is a big problem. According to the Save the Children in the Philippines, 6.2 million primary-school aged children are not in school in the Philippines. There are lack of teachers, books, school supplies and facilities. Overpopulation can cause those serious problems. Some children are also forced to leave school so they can work and support their families. In fact, According to the Save the Children in the Philippines, 11.1% of Filipino children ages 5-14 is engaged in child labor. Meanwhile, some drop out due to early marriage or pregnancy. Among Filipino girls ages 15-19, 9.7% is already married or in union.

As you can see, there are three different big effects of population growth in Philippines. Some of these things are society and others are environmental side and poverty. However, I think that extension of poverty, which is food shortage, and lack of access to education, is the most likely effect from overpopulation in the Philippines. I believe that if this population growth will continue to increase, poverty will be getting worse. Also, poverty could be the cause of overpopulation, so infinite loop will be completed in the future, and nobody can handle it. Poverty is also a big serious problem in the Philippines. Now, the government in the Philippines has to take measures on overpopulation immediately.

III

Lastly, I'm going to propose three solutions of the population growth of the Philippines, including providing better education, ending poverty, and creating political measurements to determine which solution could be the most effective to the Philippine society.

One of the biggest effective solutions of the population growth in Philippines would be that providing better education. Firstly, it is important to increase knowledge of sex education. These days there is lack of sex education for young people. Actually, according to the Philippine Website, there are two million teenage Filipina girls who are pregnant at this moment. The least option we could possibly do is to educate them. If sex education spread, unwanted pregnancy would be reduced among the teenagers. Also, teaching people about overpopulation could be effective solution. Needless to say, a lot of people don't have any knowledges about overpopulation. They need to know what will happen in the future if the population continues to increase. Through the education of overpopulation, they will think deeply about their future society and it would lead to reduce overpopulation.

The second major solution of the population growth of the Philippines is creating new political measures. Holding family planning campaigns would be great solution of the population growth in the Philippines. Family planning is one of the most important forms of humanitarian aid. According to the Worldwatch Institute, 20% of births are the result of unintended pregnancy. If those pregnancies alone were prevented, the Philippines birth rate would fall easily. Therefore, Philippine government should strengthen to promote family planning. Moreover, as an one of the birth control measures and regulations, regulating the number of children would affect well to the overpopulation of the Philippines. Having a limit of two children would be enough just to maintain the country's population. Actually, in 1979, One child policy was implemented in China, and it had been successful in lowering its birth rate. If it is realized, the population of Philippines will definitely decrease in the future.

Finally, ending poverty will be the third solution of the overpopulation in Philippines. According to the World Bank, It was proved that if poverty rates drop, birthrates soon follow in some areas in the world. Specifically, extreme poverty in Guatemala has decreased by nearly 40% since 1992, and with that decline in poverty, the average family size has fallen from almost 6 children to just over 3. In the case of Cambodia, the average of each family had nearly 6 children in 1994. However, in 2015 which is after poverty reduction, it had fallen more than 40% and average family size had decreased by more than half. Therefore, poverty reduction strategies could be huge impact to reduce population in the Philippines.

IV

In conclusion, there are three different major causes of population growth in Philippines. There are many negative effects from the many people living in poverty that will be very difficult to avoid. I think that it is impossible to avoid the negative effects of population growth in Philippines. Recently, Philippine economy is developing rapidly.

Although the government tries to promote urban development, people who live outside the city are left without much benefit of the urban growth. I think that if the population increase of Philippines continues, nobody will be able to control it. Actually, when I went there, I saw so many shocking situations and I felt that those situations were uncontrollable by the government alone. There are three possible solutions I'd like to propose: providing better education, creating political measurements, and ending poverty. I think that everything that I said here can be done. However, I believe that reducing poverty is the best way to go for the Philippine society. Before I write this essay, I have thought that ending poverty was a different problem from reducing overpopulation. However, poverty was strongly related with overpopulation. Now, poverty is also serious big problem in the Philippines. The Philippine government should consider these two problems as a same thing. The government can take political measures or policy for reducing poverty, it isn't necessary only for reducing population. In addition, people from all over the world can support Philippines by volunteering and donating to make the Philippines escape from the poverty and overpopulation.

I encountered with a lot of unbelievable facts when I visited Manila in the Philippines. At the same time, I was impressed and encouraged by the local people from the little child to the elderly because they live their lives happily and smiley even though they are in severe situations. I truly want to provide a better life for the local people I have met. From this essay, It became obvious that population growth will lead to increasing poverty rate, so what we have to do is reconsider about the current status of poverty and let people to act for the eradication of poverty.

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Does Fair Trade Really Help People in Africa? Hana Maeda

In the world, there are so many ways of helping people who suffered from poverty. However, according to UNICEF, 22000 children die each day due to poverty. Also, at least 80 percent of human living could possibly spend less than 10 dollars a day. To solve these problems, one of the ways to help people who is in this situation has been focused, which is Fair trade. Fair trade is a way of buying and selling products that makes a certain that the people who produce the goods can receive a price equally. Also, Fair trade is a trading partnership based on dialogue, transparency and respect, that seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers especially in the developing countries. Also, Fair trade means a way of buying and selling products that makes a certain that the people who produce the goods receive a fair price. However, what I always find in a shop is a label which shows that they are doing fair trade to help people in Africa but I think companies use a label of fair trade to raise their reputation. In order to judge whether fair trade does really help people in Africa or it is just a way to advertise how good their companies are, in this essay, I will list pros and cons of three kinds of Fair trade, comparison of three companies selling fair trade coffee, and comparison of three countries including Japan, UK and Canada.

I

There are three types of fair trade. I would like to explain advantages and disadvantages of three kinds of fair trade which is possible for us to join in. Firstly, FLO which stands for fair trade Labelling Organization. It is very known way of fair trade and this is the organization to decide fair trade products and they've put labels on the products. It occupies 90 % of all their profits. There are over 1.66 million farmers and workers spread across more than 73 countries participating in this organization's fair trade system. In addition, 4,500 fair trade products from about 13 kinds such as, coffee, tea and cocoa to bananas, cotton and flowers so it is very easy to participate in fair trade. Because when you shop, you just need to look for a fair trade mark and buy fair trade products. FLO has developed standards for producers and FLO has de-vel-op-ed stan-dards for pro-duc-ers and traders. These stan-dards con-sist of core and de-vel-op-ment re-quire-ments. The pro-du-cers need to meet the core re-quire-ments to re-ceive ini-tial Fair trade cer-ti-fi-ca-tion. Once cer-ti-fied, they must then fulfill fur-ther de-vel-op-ment re-quire-ments, with a view to im-prov-e their organ-i-sa-tional struc-tures and work-ing con-ditions over time and im-ple-ment mea-sures to pro-tect sustainably the en-vi-ron-ment. FLO affiliated organizations have been using an uniform fair trade label since 2003. Before they sell their products, traders and importers must acquire a licence. It does take a lot of time and work to build a relationship between workers and producers.

The World Fair Trade Organization (WFTO) constantly strives for innovative way to make Fair trade work for all producers, especially the economically marginalised producers in South. The diversity of producers engaged in various products and production processes demands a powerful Fair trade system that gives them greater market recognition and credibility through an international guarantee system and brand. Importers and wholesalers and retailers as well, benefit from our model. The Guarantee System is a dynamic tool designed for all types of trading organisations. Businesses gain added-value to their brands and organisation while helping realise the goals of Fair trade. Many groups have participated to this organization to make Fair trade products. The WFTO Guarantee System (GS) is a revolutionary Fair trade system that is clear and affordable. In 2011, the membership of the WFTO decided to develop a new type of Fair Trade system to meet the ever-growing demand for a more trustworthy Fair trade recognition scheme in the international market. The primary goal of the GS is to improve Fair trade practices in the supply chain. It is an accountability and development tool for organisation. Carrying out all the components allows WFTO members to be more competitive and responsive to evolving markets thereby creating the potential for increased sales.

Lastly, a way to help people in developing countries not to use two those ways such as FLO and WFTO. It is very unreliable however the easiest way to join in Fair trade for everyone. Anyone can make Fair trade products and there is no standard rules for certifying. And also when they want to sell products they can say like "This is a fair trade products. The global market for fair trade products has been growing annually by about 30 percent since 1999, and survey results in 2015 showed it reaching about 980 billion yen in total. In Japan, certified fair trade products have been marketed since around 2002, reaching about 86.2 million dollars.

II

Fair trade products are seen everywhere nowadays, especially fairtrade coffee is one of the most popular beverages and 80% of it is produced by 25 million smallholders. Approximately 125 million people worldwide depend on coffee on coffee for their livelihoods. It is the most valuable and widely traded tropical agricultural product and is

mainly produced by smallholder farmers. Most of them are not able to earn enough money from coffee they produce. Also, most farmers rarely have ideas of where their coffee is exported to or what price it ends up selling for. Therefore, I would like compare three companies selling fair trade coffee and consider which company truly think about farmers in developing countries the most.

Firstly, the most famous coffee shop chain, Starbucks corporation is selling fair trade coffee. Starbucks Corporation is an American company, and they are focused on ethical sourcing. They are dedicated to helping farmers overcome the challenges facing coffee communities. They are committed to buying 100 percent ethically sourced coffee in partnership with Conservation International. To improve productivity and sustainability, they share their research and resources through their Farmer Support Centers which is locate in coffee producing countries around the world. In addition, Starbucks is investing 50 million dollars to the financing for farmers, allowing them to renovate their farm or pursue more equipments. Also, they are now collaborating with the industry to make coffee the world's first sustainable agricultural product, as a founding member of the Sustainable Coffee Challenge. Starbucks has a longstanding commitment to improving the sustainability and longevity of coffee production, specifically prioritising making coffee the world's first sustainable product. As a founding member of the Sustainable Coffee Challenge, Starbucks has been an industry leader in helping farmers overcome the challenges facing coffee communities, purchasing ethically sourced coffee and ensuring the long term supply of high quality coffee. Furthermore, Starbucks has been investing over 100 million dollars so far.

Secondly, an American fast food company, Mcdonald's is also being active about fair trade coffee. They are committed to bringing customers great tasting coffee brewed from high quality coffee beans. At the same time, they think it is important that they think about the long term impacts of coffee production and trading. They are globally committed to responsible coffee sourcing , and they are focusing their efforts in two primary ways intended to drive ETHICAL, ENVIRONMENTAL and ECONOMIC outcomes in their coffee supply chain. What they basically do for fair trade is buying certified coffee, then invest in farmer training. In 2012, about 25% of their total coffee bean purchases are from Rainforest Alliance Certified farms, including 100% of their espresso and coffee. Mcdonald's markets in Europe source 100 % of their coffee with the exception of decaffeine from farms which are Rainforest Alliance Certified, UTZ certified and Fair Trade International. Mcdonald's USA, Canada and their franchisees who holds franchise for sale of goods or the operation of a service are investing over 6 million dollars in a farmer technical assistance program. Also, they are collaborating with technoServe, an international non-profit and leading provider of agricultural technical assistance, as well as SCAN which stands for Sustainable Commodities Assistance Network, to train up to 13,000 farmers in Guatemala and Central America.

Lastly, the sustainable quality coffee company, Nestle Nespresso is a pioneer reference for highest-quality portioned coffee, which has redefined and revolutionized the way millions of people enjoy their espresso coffee. This company works with more than 70,000 farmers in 12 countries through their AAA Sustainable Quality Program which is Nespresso quality coffee sourcing program, collaborated with The Rainforest Alliance in 2003. They put effort into sustainable farm management for improved yield and quality. Additionally, the program focuses on community stability and landscape resilience with the deployment of actions like agroforestry, farmer savings scheme, crop insurance, and water stewardship.

III

According to research in 2015 from Fairtrade forum, only 29.3% of people in Japan knows the existence of Fairtrade and fair trade purchase rate is only 12.4%. These numbers are the worst in developed countries and 85.2% of people in Japan have never seen a Fair trade certified label. Compared to Japan, UK, Germany, France and Switzerland have higher percentages of people who knows Fair trade. Fair trade all started in the United States, where ten thousands villages began buying needlework from Puerto Rico in 1946, and SERRV began trading with poor communities in the south in the late 1940s. The first formal "Fair trade" shop which sol these and other items opened in 1958 in the USA. According to professor, Toshihisa Nagasaka from Takushoku university, Switzerland has the highest number of Per capita expenditure of Fair Trade certified products and it is 21.06 euro and second highest country is the UK which is 11.57 euro. However, Japan shows the lowest number which is 0.06 euro. Therefore, I would like to compare three countries, including Switzerland, UK, and Japan.

Fair trade in Japan is not known well as it in other countries. However, Japanese companies such as IEON group known as TOP value bland, MUJI, Starbucks, Tully's Coffee and Natural Lawson mainly deal with Fair trade products especially coffee beans. Additionally, during Valentine's day in Japan, there are some events which sell certified Fair trade chocolates products.

On the other hand, Fair trade movement in Switzerland is incredible. They are able to sell Fairtrade coffee, chocolates, orange juice, honey and roses. All of these are able to buy easily at supermarkets and Fair trade does not mean that you can afford to buy products and crops with very cheap price. It is a movement that we can help developing

countries to buy and sell equally with fair price. And, this movement got around the Europe since 1960s and then Switzerland actively does fair trade now.

Lastly, according to 2013 statistics from fairtrade international, Japanese profit of Fair trade products is one-thirty of the profit of the UK. Also, 78% of people in the UK knows Fair trade mark, and one of the bananas sold in the UK is fairtrade bananas and, 25% of brewed coffee from UK is certified Fair trade products.

IV

To sum up, there are so many ways to join in Fair trade and there are over 4,500 products which is certified as a Fair trade and, some companies are selling fair trade products and helping lives in developing countries. However, even now so many people have never seen a Fair trade mark or never bought a fair trade products. Finally, I think Fair trade system does really help people in developing countries. However, many people in Japan do not know how Fair trade works or why Fair trade is done by the companies. I think it is important to buy Fair trade products but more importantly, you should know the process of how it works and what kinds of people are making the products.

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