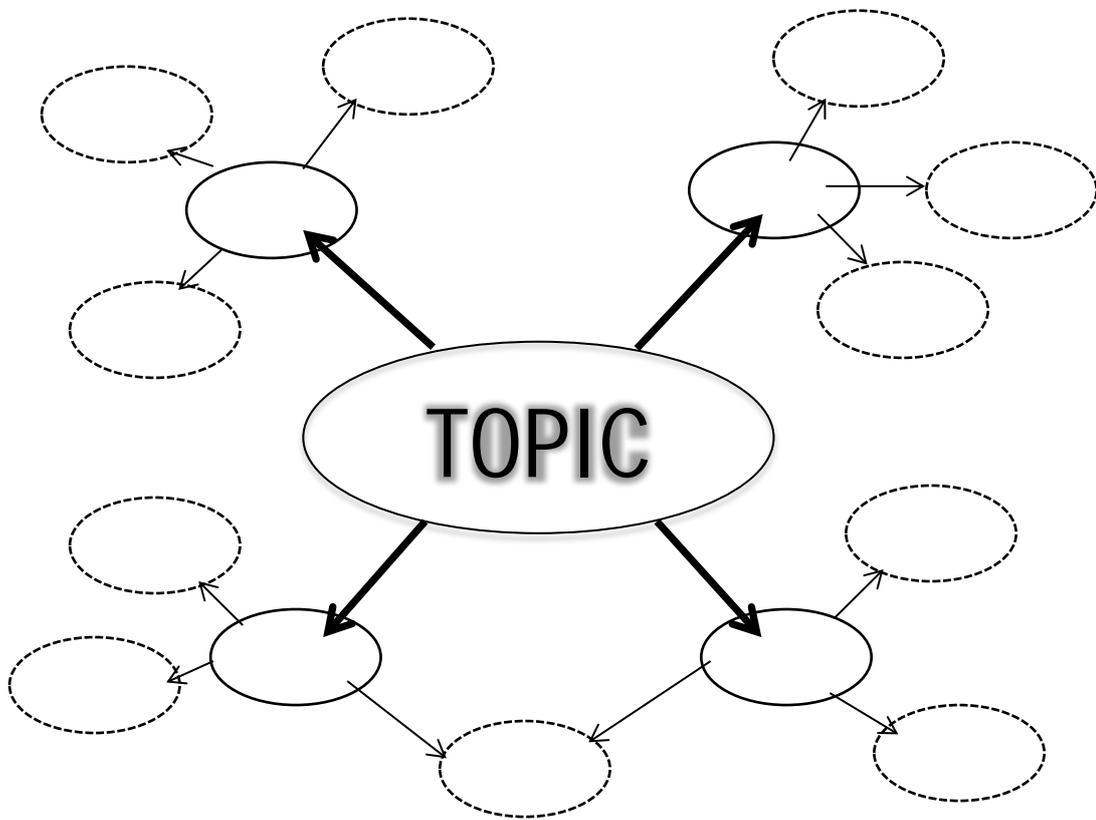


2017 B2 Articles



Name _____

Elon Musk Releases Detailed Plans for Colonizing Mars and Other Planets
June 21, 2017 by PAUL RATNER

Having previously teased that he'd like to put one million people on Mars, tech billionaire and serial entrepreneur Elon Musk released the specifics of his plan to colonize space. His paper "Making Humans a Multi-Planetary Species" outlines what kind of technology humans will need to make that dream a reality, including how to build a city on Mars, as well as the timeline for this endeavor.

Musk proposes that it's a necessity to make humans a space-faring civilization, citing the inevitable "doomsday event" that will befall us sooner or later. One big goal in making us a "multi-planetary species" would be to create a city on Mars that works not just an outpost but as a self-sustaining settlement that will drive the planet's colonization.

The SpaceX, Neuralink, and Tesla Motors CEO sees Mars as the best destination for such a city because it has conditions better suited for a human colony than other planets - it has atmosphere, it's rich in resources, its day is 24.5 hours, similar to Earth's. In fact, the red planet is so similar to Earth that "if we could warm Mars up, we would once again have a thick atmosphere and liquid oceans," writes Musk.

Here's how Musk compared Earth and Mars head to head:

mars vs earth

The big problem in getting people to Mars now? Exorbitant costs of about \$10 billion per person, if we were to use traditional "Appolo-style" approaches. Musk wants that number to go down by 5 million percent. If the number is closer to \$200,000 per person (a median house price in the U.S.), Mars colonization would become a reality. Musk sees this number dropping even lower eventually, to below \$100,000 per person.

How would Musk bridge that gap? Most of the improvement would come from rocket reusability, while other cost savings would lie in figuring out how to refill in orbit and produce propellant on Mars. Choosing the right propellant is also important. Musk says methane would be easier and cheaper to harvest on Mars than, for example, hydrogen.

Getting people to Mars and other planets would be the job of the Interplanetary Transport System, which will feature a booster and a spaceship powered by the Raptor engine, currently in development by SpaceX. It will be 3 times more powerful than the engine currently powering the Falcon 9 rocket from SpaceX.

The booster, which Musk aims to make reusable up to a 1,000 times, would have 42 Raptor engines, making it the most powerful rocket in history. The booster would also be capable of launching 300 metric tons into low Earth orbit. Compare that to NASA's Saturn V moon rocket which could lift 135 metric tons.

Here's how the whole system that SpaceX is looking to implement would operate:

Musk transport system

Musk also gives some details on how a trip to Mars aboard one of his ships would look like - a trip he estimates would take about 115 days. It's important to make such a journey "fun and exciting," with zero-gravity games, movies, lecture halls, cabins and a restaurant, Musk writes.

Once we figure out how to get humans to Mars in an efficient and consistent manner, Musk imagines that the colony there would need a million people for a self-sustaining city. To get them there would require

1,000 ships, each carrying 100 people. With travelling to the red planet possible every 26 months thanks to having to wait for favorable alignment with Earth, the whole process of colonizing Mars would take about 40-100 years after the first ship goes, which is currently planned for 2023.

Musk also considers going to other parts of the solar system by envisioning a system of planet or moon hopping. Besides creating and improving spacecraft, the key for further colonization of space would be to establish propellant depots in the asteroid belt or the moons of Jupiter or Saturn. That would enable flights to these and other planets.

How realistic are Musk's plans? The prolific entrepreneur has a proven track record in methodically carrying out his visions. He also sees the colonization of Mars as such a personal priority that he says he's making money primarily for that purpose:

"I should also add that the main reason I am personally accumulating assets is in order to fund this. I really do not have any other motivation for personally accumulating assets except to be able to make the biggest contribution I can to making life multi-planetary," writes Musk.

Scott Hubbard, the editor-in-chief of *New Space*, a peer-reviewed space exploration journal that published the paper, thinks Musk's paper is a great jumping-off point for further discussion:

"In my view, publishing this paper provides not only an opportunity for the spacefaring community to read the SpaceX vision in print with all the charts in context, but also serves as a valuable archival reference for future studies and planning. My goal is to make *New Space* the forum for publication of novel exploration concepts—particularly those that suggest an entrepreneurial path for humans traveling to deep space," said Hubbard.

<http://bigthink.com/paul-ratner/elon-musk-releases-plans-for-colonizing-mars-and-other-planets>

Op-Ed: 'Label It Yourself' Campaign — Citizen Action to label GMOs (edited)

By Anne Sewell March 20, 2012

A nationwide campaign has begun in the USA to label foods that may contain GMOs, to make the public aware of the dangers of genetically modified organisms in food. People from across the USA, who are concerned by the increasing scientific data that indicates serious economic, environmental and public health risks associated with GMOs, are taking matters into their own hands by labeling foods that may contain GMOs (genetically modified organisms). The nationwide campaign to "Label it Yourself" has begun.

If there is nothing to hide, why hide it?

Polls have consistently demonstrated that the vast majority of Americans want to know if the food they are purchasing contains GMOs. They have a right to know what they are buying and consuming. More than 40 countries around the world require the labeling of genetically engineered food. However, the United States Food and Drug Administration (FDA) has refused mandatory labeling, citing industry claims that genetically engineered food is the same as conventional food. But with an estimated 80% of processed food in the USA containing GMOs, Label It Yourself is asking: "If there's nothing to hide, why hide it?"

What are GMOs?

GMOs, also known as transgenics, are plants or animals that have been created by splicing DNA into them from other plants, animals, bacteria, or viruses, in order to create an organism that would not otherwise occur in nature. Most of the GMOs on the market have been created to tolerate herbicides and pesticides applied to crops, in many cases incorporating the pesticide into the plant itself.

Health, Nutritional and Environmental Effects

While the long-term impact of GMOs on humans are unknown, increasing evidence connects these genetically modified organisms with potential health problems (including infertility, birth defects, allergies, and digestive problems), environmental damage (including degraded soil health, and biological pollution) and violation of farmers' and consumers' rights.

'Label It Yourself' campaign

As more and more like-minded citizens across the USA advocate mandatory labeling, the Label It Yourself campaign offers shoppers tools to know what products are most likely to contain GMOs, and also to label the products themselves. Open source labels are available for download so that people can create stickers to do their own labeling of GMO food products in stores.

93% of US consumers support labeling of GMOs

A 2010 Thomson Reuters PULSE™ Healthcare Survey poll found that 93% of US consumers support the labeling of GMOs. And yet, despite these findings, and President Obama's promise during his presidential campaign to push for labeling, the US government has refused to allow labels for GMO food to appear on grocery shelves in America. "Human beings are not just consumers or voters as the corporate and political advertising industry likes to believe. People are free, and they want the truth, which, if you think about it, is the only thing worth advertising," says a member of the Occupy Wall Street Food Justice Working group. "Label It Yourself is a citizen's campaign to empower people to make informed decisions about the food they buy, without waiting for government or corporations to do it for them."

<http://www.digitaljournal.com/article/321535>

IOC approves addition of 5 sports for 2020 Tokyo Olympics

By STEPHEN WILSON

OLYMPICS AUG. 04, 2016 - 06:30AM JST (10)RIO DE JANEIRO —

Olympic leaders approved the addition of five sports to the program of the 2020 Tokyo Olympics on Wednesday, including the return of baseball-softball and the introduction of youth-oriented events such as skateboarding and surfing.

International Olympic Committee members voted unanimously to accept the five-sport package, which also includes karate and sport climbing.

The five were put forward for inclusion last year by Tokyo organizers, taking advantage of new IOC rules that allow host cities to propose the inclusion of additional sports for their own games. Wednesday's approval was for the Tokyo Games only.

The new sports will add 18 events and 474 athletes to the program. The Tokyo Games will now feature 33 sports and about 11,000 athletes, compared to the usual number of 28 sports and 10,500 athletes.

While baseball and softball - both highly popular in Japan - will be returning after a 12-year absence, the other sports will be making their Olympic debuts.

The IOC called it "the most comprehensive evolution of the Olympic program in modern history."

"Taken together, the five sports are an innovative combination of established and emerging, youth-focused events that are popular in Japan and will add to the legacy of the Tokyo Games," IOC President Thomas Bach said.

Baseball and softball have been off the Olympic program since the 2008 Beijing Games. The two were rejected in separate bids to return for the 2016 Rio de Janeiro Olympics, so they combined forces to put forward a single bid for inclusion in Tokyo.

Baseball was a full part of the Olympic program from 1992 to 2008, with softball joining in 1996. The IOC voted them both out in 2005.

Baseball will have a six-team tournament, short of the eight-team format sought by officials from the sport's international federation. Women's softball will also have six teams. The games will be played at a shared venue in Yokohama.

"Today's historic decision by the IOC is a 'home run' for the Olympics, our sport and the Tokyo 2020 Games," said Riccardo Fraccari, president of the World Baseball Softball Confederation. "It will be the most covered and most exciting international baseball/softball tournaments in history, which will help build our case to be featured in future Olympic Games, as well."

Major League Baseball commissioner Rob Manfred also welcomed the IOC vote.

"Baseball and softball are global sports that belong in the Olympics," he said, adding that their approval "will allow fans throughout the world to again enjoy baseball and softball on the Olympic stage."

Before the vote, several IOC members questioned whether baseball would have the world's top players at the games. While pro leagues in Japan and some other countries have agreed to shut down their seasons to send their players to the Olympics, MLB has declined to do so.

Franco Carraro, who chairs the IOC's program commission, said he hopes the international federation can still reach an agreement with MLB, in line with the deals with the NBA and NHL that brought pro basketball and ice hockey players into the Olympics.

If not, Carraro said, it will be "difficult for baseball to be included in the future" beyond the Tokyo Games.

Skateboarding will have street and park events, and feature 80 athletes - 40 men and 40 women. In climbing, 40 competitors will take part in the disciplines of speed, bouldering and lead (also known as sport). Karate will have 80 athletes competing in men's and women's Kumite and Kata events, while surfing will have two shortboard events for 40 competitors.

The surfing competition will be held on natural waves at a beach location in Chiba prefecture.

"Our Olympic dream has now become a reality," International Surfing Association president Fernando Aguerre said. "This is a game-changing moment for surfing. With its unique and modern blend of sport performance, style and youth culture, surfing will help deliver something special to the games."

Skateboarding and sports climbing events will be held in temporary venues in urban settings in Tokyo, while karate will be contested at the Nippon Budokan in the capital.

Organizers hope skateboarding will catch on with worldwide viewers as halfpipe in snowboarding did in the Winter Olympics.

"I've always believed that if skateboarding was properly protected and supported, its appearance on the Olympic stage could change the world," International Skateboarding Federation president Gary Ream said.

Skateboarding's approval came despite tensions between rival federations.

For the Olympics, a special "Tokyo 2020 skateboarding commission" was formed to run the sport. It is a collaboration between the International Roller Sports Federation (FIRS) and the ISF.

A lawsuit was filed last week in California by the World Skateboarding Federation (WSF). It alleged the ISF abruptly canceled scheduled drug testing at an event last year because of fears that several riders would test positive.

The lawsuit also alleged that Ream struck up a friendly relationship with Christophe Dubi, the IOC Olympic Games executive director, and provided Dubi's son with free training at a skateboarding camp he owned.

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<http://www.japantoday.com/category/olympics/view/ioc-approves-addition-of-5-sports-for-2020-tokyo-olympics>

Good or Bad, Baby Names Have Long-lasting Effects
Jeanna Bryner Date: 13 June 2010 Time: 10:31 AM ET

Choosing a baby name proves to be a challenging task for many parents. And they're wise to work hard at it. A name can have a profound impact on a child that reverberates well into adulthood, a growing body of research suggests.

"There is a reason why baby name books are extremely popular," said David Figlio of Northwestern University in Illinois. "We're always trying to think about the first bit of a child's identity and so if we as a society pay a lot of attention to names it makes a lot of sense that people's names might influence how they think about themselves and the way in which people might think about them."

Plenty of research suggests the name chosen impacts a baby's life well into adulthood. For instance, donning your newborn boy with a girly sounding name could mean behavioral problems later in life. And unique baby names that only your child will have can be a hardship too.

A British study of 3,000 parents released in May suggests one-in-five parents regret the name they chose for a child, many of whom were distressed over the unusual or oddly spelled names they'd chosen. And even those who didn't explicitly regret the name choice admitted there were names they knew now they wished they'd chosen then, according to the study conducted by Bounty.com.

Girly names

Boys with names traditionally given to girls are more likely to misbehave than their counterparts with masculine names, research suggests. Girls given boy names also see an effect.

Socioeconomic status and expectations

Just as a person's accent or clothing can indicate something about that individual's background or character, so can a first name. And just like any other external indicator, names can lie.

Meeting low expectations

The link between a name and success later in life could have to do with these kids fulfilling others' expectations of them. Names that sound as though they came from a family of low socioeconomic status, might be tagged as less capable of achieving, for instance.

Self-esteem

Whether or not your name sounds upper class might not matter if you don't like it. Accumulating research has shown a strong link between a person's like or dislike of his or her name and high and low self-esteem, respectively.

Unusual vs. common names

When it's time to pick baby's name, there are two types of parents, those who want an unusual baby name and those who prefer a more common name donned by lots of kids. Turns out, even if the particular name chosen doesn't make a difference in a child's success later in life, whether or not that name is common or unusual does matter.

The difference between choosing, say, one of five common, relatively likeable names is small in terms of any impact on the child's life. "If you're choosing between a relatively likeable, common name and one that is really odd, that definitely could have an impact," Twenge said.

<http://www.livescience.com/6569-good-bad-baby-names-long-lasting-effects.html>

5 Reasons Japanese Convenience Stores Rock

By Scott R Dixon LIFESTYLE DEC. 26, 2013

If you have ever lived in or visited Japan, odds are you have come to love these convenience stores which are amazing places. But what exactly makes Japanese convenience stores so different and special compared to those overseas? Here are five reasons why we think these “conbini” totally live up to the hype.

Food quality

Although many convenience stores around the world stock food, Japan stands out for the high-quality food available at almost all hours of the day. It is not surprising that a country whose cuisine had been added to UNESCO’s Intangible Cultural Heritage list would even value the quick, ready-made food in convenience stores.

Rice balls with all kinds of yummy fillings can be bought for around 100 yen each while affordable ready-made meals often use locally sourced and seasonal ingredients. During the winter, you can warm yourself up quickly with a bowl of oden or a steamed pork bun. And in summer, all kinds of different ice cream treats fill the freezer section.

Free public restrooms

There are convenience stores practically every few blocks in larger cities in Japan and most of them have clean restrooms anyone can use. Many of them are a pretty good size as well, just in case you need to change your clothes mid-day. So stop hunting for that public bathroom and just look for the glowing sign of a convenience store. Even if you’re not actually buying anything at the store, a quick “*sumimasen toire o tsukaimasu*” (“Excuse me, I’m using/would like to use the toilet”) will be greeted with a smile and a nod.

Services galore

Japanese convenience takes the word “convenience” very seriously and is more than just a store full of products. In fact, a lot of people come in and don’t even buy anything. Many use the in-store copy machines, ATMs, movie/concert/overnight bus ticket kiosks and instant picture printers. Many stores also have some sort of partnership with delivery services, making them a great alternative to long lines at the post office, and you can even arrange for your luggage to be kept safe and shipped to the airport, saving you the hassle of lugging it with you on the trains to catch your flight.

All the vices you need

Besides toothpaste and milk, Japanese convenience stores also sell just about any vice you need. The bookshelves normally stock porn magazines and saucy manga, and you can buy cigarettes or booze 24 hours a day. Of course if you are an alcoholic, chain-smoking porn-addict, you might want to stay away, but, hey, the cashier won’t judge you – they merely ask that you hit the button on the register touch screen saying “I confirm that I’m over 20 years of age”

Hospitality

One of the first things you will notice in a Japanese convenience store is the attentiveness of the staff. Besides making sure to greet everyone who enters, the stores are usually kept immaculately clean and everything is lined up neatly on the shelves. And if you buy a ready-made meal that needs heated up, the cashier will be more than happy to microwave it for you and provide everything from disposable chopsticks to tiny plastic sporks and drinking straws. There is even a hot water pot to use for your recently purchased cup ramen, and staff will bag your purchases separately if you have both hot and cold items—well, that or do some exceptionally clever packing.

This is the Japanese convenience store: a friendly place open 24 hours a day where you can get almost anything you want.

<http://www.japantoday.com/category/lifestyle/view/5-reasons-japanese-convenience-stores-rock>

The 12 Types of Japanese Otaku

posted by John Spacey, June 15, 2009 updated on June 01, 2012

Otaku are people who are obsessed with a hobby to the extent that it becomes a major part of their identity. Otaku (おたく) has a somewhat negative connotation in Japanese. Much like the English word "nerd", "otaku" implies socially awkwardness.

A person can be otaku about practically any hobby or interest. The most common types of otaku in Japan are:

1. Anime / Manga Otaku

Virtually everyone in Japan has read manga or watched anime at some point. However, some people are obsessed with it.

2. Cosplay Otaku

Cosplay Otaku are into wearing costumes and role playing. In many cases cosplay otaku are highly social and gain friends through cosplay activities. They may spend large amounts of money attending events and buying costumes. In many cases, they learn to make their own costumes (sewing etc..).

3. Game Otaku

Game Otaku spend much of their time playing games. They usually establish social connections in virtual worlds with people they may never physically meet.

4. Idol & JPop Otaku (*Wota*)

A *Wota* is obsessed with female or male idols (often JPop idols). For example, the JPop group AKB48 has a musical theatre in Akihabara in which they perform nightly. Wota collect idol magazines and posters and often seek to meet or photograph idols in person.

5. Figure otaku (Figure moe zoku ~ フィギュア萌え族)

Figure Moe Zoku can be translated as "figurine lover gang". It's a term for collectors of Anime / Manga figures. These figures are often highly realistic.

6. Train Otaku (Tetsudou Otaku)

There are plenty of trains in Japan. Tetsudou Otaku are obsessed with photographing trains and/or riding trains. They may also be interested in train uniforms and model trains.

7. Robot Otaku

Japan invests far more than any other country in robot research. Many Japanese robots are frighteningly advanced.

Robot Otaku are interested in popular culture related to robots. They may also take interest in robot research. In extreme cases, they're involved in building robots (as a hobby). There's a shop in Akihabara that sells nothing but robot parts.

8. Pasacon Otaku

Pasacon Otaku are obsessed with computer technology. They study hardware and software specifications in detail. They enjoy discussing the latest devices. They may spend large amounts of time configuring and customizing software. In some cases, they become experts at computer programming or network security.

9. Wapanese

Wapanese comes from the English "Want to be Japanese". They are non-Japanese people who have an obsessive interest in multiple aspects of Japanese culture. They may develop an incredibly positive view of Japan that's somewhat unrealistic. Some become skilled at Japanese language and/or martial arts.

10. Female History Otaku (*Reki-jo*)

Reki-jo are female history buffs. They're interested in pre-industrial Japanese history. They view this period as an ideal age of innocence and adventure. *Reki-jo* often form social groups that gather to dress in period costumes. They may adapt the speech and mannerisms of old Japan.

11. Voice Actress Otaku (Seiyuu Otaku)

One of the many sub-types of Anime Otaku. Seiyuu Otaku are obsessed with the voice actors and actresses from Anime productions.

12. Military Otaku (*Gunji Ota*)

Gunji Ota are obsessed with military uniforms, hardware and war stories (often in manga form).

<http://www.japan-talk.com/jt/new/12-types-of-otaku>

What's Wrong With the Drinking Age

Kurt Michael Friese, Chef 8/4/11

Indulge me, if you will, in something of a birthday rant.

Today my daughter turns 21. Although it has been legal for her to drive, vote, smoke and kill and die for her country for quite some time, she now is officially permitted by society at large to enter a bar and have a beer. As a father, and with this being my youngest child and only daughter, am I concerned that this will lead to some sort of binge behavior now that the forbidden fruit is within her grasp? Short answer: No.

If I could wave a magic wand, there would be no drinking age. I find the concept of it to be the largest single mass abdication of parental responsibility in our society. As a group, the American people decided we were unable to raise our children with the understanding that wine, beer and cocktails are foods, and so we asked our government to treat them as drugs. We erected a barrier between childhood and adulthood that kids could see over but were told they could not cross.

Of course, if I were to wave that magic wand today, there would be dead kids all over our highways, because most of them were not raised to appreciate a simple glass of wine with dinner. They were not taught that, like the rest of the food in front of them, there's a "just right" amount, and there's a "too much" amount. A single glass of wine has never hurt anyone, and actually can be a healthful (as well as delicious) addition to a meal.

Instead, they were taught the irreconcilable lesson: Authority says it's dangerous, while society says it's just about the most fun you can have and will lead to the stuff that's more fun. Doubt that? Go to a high school health class, then watch a beer commercial during a football game.

This applies not just to beer and wine but cocktails as well. Skill in preparation and moderation in consumption are the keys, but a vast majority of bars emphasize only speed and strength with a cheap price. Witness the prevalence of straight-alcohol shots of every flavor and description that get lined up on bars throughout Iowa City's downtown every night.

Kim and I taught our daughter that these things are foods and that overdoing any food is unwise. Try eating a full-sized package of double-stuff Oreos or a 32-ounce porterhouse steak and the way you'll feel afterward is not too dissimilar to a hangover. Did I always set a perfect example? No. No one ever does. But we did the best we could and we succeeded.

This evening I will take my daughter to a local watering hole and indulge with her in her first (legal) drink. Probably scotch. Followed by a long and filling meal with the appropriate beer or wine. Just our way of civilizing consumption. After all, Kim and I raised a civilian, not a consumer.

http://www.huffingtonpost.com/kurt-friese/whats-wrong-with-the-drin_b_918946.html

Japan is losing its drive to get behind the wheel BY PHILIP BRASOR AND MASAKO TSUBUKU

Last month, Ford Motor Co. announced it would leave Japan by the end of the year, claiming the country has a “closed” market. American car companies have been complaining about Japanese protectionism since the 1980s, and gradually won concessions that resulted in greater opportunities for foreign automobiles in Japan, but they seem to have benefited manufacturers other than American ones.

It’s true, as the Ford spokesman told reporters, that the Japanese government helps domestic carmakers, but there was something about his tone that implied Ford never expected much from Japan. It only sold 5,000 cars here last year, and demographics being what they are, even if all the so-called barriers were lifted tomorrow, that figure likely wouldn’t rise much. So it’s best to get out while the getting is good.

Domestic manufacturers don’t foresee much improvement in Japan either, which is why they’re concentrating on overseas markets. Toyota enjoyed ¥2.3 trillion in sales in the U.S. between April and December last year, representing a 9 percent increase in operating profit over the same period in 2014. The company recently announced it would make Daihatsu a subsidiary in order to take advantage of the company’s expertise in the kinds of small cars that can be sold in emerging automobile markets.

Nevertheless, the company is still cautious. According to the Asahi Shimbun, although Toyota will spend ¥20 billion more on facilities investment in 2016 than it had originally planned, it is also sending out signals that workers will not receive a wage increase commensurate with the company’s record profits. Last year, Toyota’s labor union demanded a ¥6,000-a-month increase and got most of it. This year, despite an even better business performance, they will ask for about half that, understanding that management is nervous about Toyota’s “international competitiveness.”

The company asked parts suppliers in October to cut prices, a semiannual “custom” Toyota suspended two years ago in line with Prime Minister Shinzo Abe’s call for wage increases. In other words, after a brief hiatus it’s back to business as usual, which means workers in the automotive field shouldn’t expect bigger paychecks.

What this seems to indicate is that Japanese automotive workers are being asked to sacrifice wage hikes for the sake of world domination, which may also mean manufacturers think the domestic market is a lost cause. Car ownership is becoming more difficult for average people. Young Japanese are not as keen about automobiles as their elders were. Ford saw these circumstances as constituting a structural obstacle to its business, but it’s a natural phenomenon.

For Japanese baby boomers, the automobile was a prime aspirational symbol during the era of economic growth, but for millennials it is simply a tool, which means that if there is no immediate need for it, then they can do without a car. In a 2013 survey conducted by insurance company Sony Assurance, 70 percent of Japanese in their 20s said the main criterion for choosing a car was cost.

The trend away from cars as a status item started more than 20 years ago. Used car sales exceeded new car sales for the first time in 1992. New car sales peaked in 1990 at 7.78 million vehicles, while used car sales peaked at 8.24 million in 1997, and since then overall car sales have dropped. In 2014, 6.31 million used cars were sold as opposed to 5.56 million new cars. In 2015, sales for new cars and used cars decreased by 30 percent and 20 percent, respectively.

This practical approach to the product extends to operating them. Fewer young people are acquiring drivers licenses. In Japan you are statistically much more likely to pass your road test if you attend a driving school, but courses cost upwards of ¥200,000, so if a person doesn't think they'll drive very often, they aren't going to spend that much money for a license. Between 2003 and 2013, more than 100 driving schools in the Tokyo metropolitan area went out of business, and the number of people who "graduated" from such schools dropped by more than 300,000.

Looking at the matter structurally, investment consultant Heisuke Kamiki, in his book "Okane no Wakare Michi" ("The Fork in the Road of Money"), says that young people with a modest level of means, recognizing the drawbacks of the Japanese national pension system, understand they have to start saving money now for their old age, and car ownership is one of the lifestyle options they are giving up. He then goes on to enumerate all the ways that car ownership is an economic liability.

For one thing, car-related taxes can exceed the basic price of a car depending on how long you own it. The average price of a new car these days for first-time buyers is ¥1.8 million. At the time of purchase they pay an 8 percent consumption tax, a car acquisition tax and a weight tax. Afterward they pay an automobile tax every year and a gasoline tax every time they fill their tanks, which also includes consumption tax.

In addition, the car owner will pay road tolls, mandatory insurance, a recycling fee and, of course, parking fees, which in Tokyo — the only region in Japan where the population is on the rise — average between ¥20,000 and ¥30,000 a month. And that doesn't even include regular mandatory vehicle inspections and unforeseen costs for repairs and maintenance, not to mention the interest on the car loan, if the buyer didn't pay cash. Kamiki estimates that if a person owns their new car for 13 years, they will pay ¥11.2 million exclusive of the initial cost of the car just to own it.

Knowing this, many people are now taking advantage of alternatives to car ownership. According to the Foundation for Promoting Personal Mobility and Ecological Transportation, the number of vehicles available through car-share services has quadrupled since 2011, and the number of members of car-share providers has increased sevenfold. This number, 700,000, is still well below the number of car owners, but as these companies spread their services to suburbs and rural areas, membership will certainly grow. The foundation projects that the car-share market will be worth ¥29.5 billion by 2020.

Of course, carmakers are anxious about these trends, and have lobbied the government to reduce taxes, but it's difficult since revenues are earmarked even before they're collected for things like infrastructure maintenance.

Local governments also rely heavily on car-related taxes. The best the central government can do is implement tax breaks for things like "eco-cars," but even then it's a problem because the savings are only temporary. When the government increased the vehicle tax on mini-cars several years ago due to pressure from the Americans, who don't make mini-cars, sales of mini-cars dropped significantly. And mini-cars are the definition of a practical vehicle because they tend to lack design features and are built for economy and utility.

So while young people may be walking away from automobiles due to difficult financial circumstances, they are staying away because they've found they can do without them.

<http://www.japantimes.co.jp/news/2016/02/13/business/japan-losing-drive-get-behind-wheel/#.WUo-kuuGOUk>

Economic Inequality: It's Far Worse Than You Think

The great divide between our beliefs, our ideals, and reality

By Nicholas Fitz | March 31, 2015

According to Pew Research, most Americans believe the economic system unfairly favors the wealthy, but 60% believe that most people can make it if they're willing to work hard.

In a candid conversation with Frank Rich last fall, Chris Rock said, "Oh, people don't even know. If poor people knew how rich rich people are, there would be riots in the streets." The findings of three studies, published over the last several years in *Perspectives on Psychological Science*, suggest that Rock is right. We have no idea how unequal our society has become.

In their 2011 paper, Michael Norton and Dan Ariely analyzed beliefs about wealth inequality. They asked more than 5,000 Americans to guess the percentage of wealth (i.e., savings, property, stocks, etc., minus debts) owned by each fifth of the population. Next, they asked people to construct their ideal distributions. Imagine a pizza of all the wealth in the United States. What percentage of that pizza belongs to the top 20% of Americans? How big of a slice does the bottom 40% have? In an ideal world, how much should they have?

The average American believes that the richest fifth own 59% of the wealth and that the bottom 40% own 9%. The reality is strikingly different. The top 20% of US households own more than 84% of the wealth, and the bottom 40% combine for a paltry 0.3%. The Walton family, for example, has more wealth than 42% of American families combined.

We don't want to live like this. In our ideal distribution, the top quintile owns 32% and the bottom two quintiles own 25%. As the journalist Chrystia Freeland put it, "Americans actually live in Russia, although they think they live in Sweden. And they would like to live on a kibbutz." Norton and Ariely found a surprising level of consensus: everyone — even Republicans and the wealthy—wants a more equal distribution of wealth than the status quo.

This all might ring a bell. An infographic video of the study went viral and has been watched more than 16 million times.

In a study published last year, Norton and Sorapop Kiatpongsan used a similar approach to assess perceptions of income inequality. They asked about 55,000 people from 40 countries to estimate how much corporate CEOs and unskilled workers earned. Then they asked people how much CEOs and workers should earn. The median American estimated that the CEO-to-worker pay-ratio was 30-to-1, and that ideally, it'd be 7-to-1. The reality? 354-to-1. Fifty years ago, it was 20-to-1. Again, the patterns were the same for all subgroups, regardless of age, education, political affiliation, or opinion on inequality and pay. "In sum," the researchers concluded, "respondents underestimate actual pay gaps, and their ideal pay gaps are even further from reality than those underestimates."

These two studies imply that our apathy about inequality is due to rose-colored misperceptions. To be fair, though, we do know that something is up. After all, President Obama called economic inequality "the defining challenge of our time." But while Americans acknowledge that the gap between the rich

and poor has widened over the last decade, very few see it as a serious issue. Just five percent of Americans think that inequality is a major problem in need of attention. While the occupy movement may have a tangible legacy, Americans aren't rioting in the streets.

One likely reason for this is identified by a third study, published earlier this year by Shai Davidai and Thomas Gilovich that suggests that our indifference lies in a distinctly American cultural optimism. At the core of the American Dream is the belief that anyone who works hard can move up economically regardless of his or her social circumstances. Davidai and Gilovich wanted to know whether people had a realistic sense of economic mobility.

The researchers found Americans overestimate the amount of upward social mobility that exists in society. They asked some 3,000 people to guess the chance that someone born to a family in the poorest 20% ends up as an adult in the richer quintiles. Sure enough, people think that moving up is significantly more likely than it is in reality. Interestingly, poorer and politically conservative participants thought that there is more mobility than richer and liberal participants.

According to Pew Research, most Americans believe the economic system unfairly favors the wealthy, but 60% believe that most people can make it if they're willing to work hard. Senator Marco Rubio says that America has "never been a nation of haves and have-nots. We are a nation of haves and soon-to-haves, of people who have made it and people who will make it." Sure, we love a good rags-to-riches story, but perhaps we tolerate such inequality because we think these stories happen more than they actually do.

We may not want to believe it, but the United States is now the most unequal of all Western nations. To make matters worse, America has considerably less social mobility than Canada and Europe.

As the sociologists Stephen McNamee and Robert Miller Jr. point out in their book, "The Meritocracy Myth," Americans widely believe that success is due to individual talent and effort. Ironically, when the term "meritocracy" was first used by Michael Young (in his 1958 book "The Rise of the Meritocracy") it was meant to criticize a society ruled by the talent elite. "It is good sense to appoint individual people to jobs on their merit," wrote Young in a 2001 essay for the Guardian. "It is the opposite when those who are judged to have merit of a particular kind harden into a new social class without room in it for others." The creator of the phrase wishes we would stop using it because it underwrites the myth that those who have money and power must deserve it (and the more sinister belief that the less fortunate don't deserve better).

By overemphasizing individual mobility, we ignore important social determinants of success like family inheritance, social connections, and structural discrimination. The three papers in Perspectives on Psychological Science indicate not only that economic inequality is much worse than we think, but also that social mobility is less than you'd imagine. Our unique brand of optimism prevents us from making any real changes.

George Carlin joked that, "the reason they call it the American Dream is because you have to be asleep to believe it." How do we wake up?

<http://www.scientificamerican.com/article/economic-inequality-it-s-far-worse-than-you-think/>

Japan an unhealthy longevity superpower

Aug. 16, 2016 06:30 am JST

Want to live long? Laugh. Got nothing to laugh about? Laugh anyway. Force yourself. Seriously. Many factors go into longevity, some obvious, others mysterious. It makes sense, somehow, that a mirthful disposition would be conducive to long life, and so it is – people who laugh naturally and readily live, on average, seven years longer than those of sour mien. The surprise is that even forced laughter is life-promoting – not as much so a natural laughter, but by roughly two years over non-laughers.

Japan's longevity is world-leading, men living on average 79 years, women 86. A closer look blunts the celebration that seems to call for, says Sapio (September): "Japan is an unhealthy longevity superpower." Health ministry statistics illustrate the point. On average, they show, Japanese spend the last 10 years of their lives ill or incapacitated to the point of needing care.

The conventional wisdom on health and longevity is deceptively misleading, the magazine finds. Eat sensibly, exercise moderately, rest sufficiently – and live long. It's still good advice, but far from the whole story. It fails to include what medical experts now consider the most important point of all – "connectedness." Isolation is the biggest killer, the best promoter of illness.

Dr Yoshiki Ishikawa cites American research comparing the longevity of married people versus the single or divorced; people who socialize or engage in volunteer activities versus people who don't. The difference is too marked to be mere chance: the death rate for "unconnected" men versus "connected" men is 2.3 times higher; 2.8 times higher for women.

Particularly striking in Japan are regional differences in longevity. Yamanashi and Shizuoka Prefectures top the list. Nature in both places is abundant and beautiful (they share Mount Fuji) – leading to much hiking, climbing and vegetable consumption. Shizuoka in particular boasts an old tradition of fostering the "connectedness" Ishikawa touts. The prefecture is rich in "cooperative associations," membership dues financing group travel, group dinners and drinking and other forms of life-stretching, health-promoting conviviality. (Presumably the dining and drinking doesn't veer into the excess that would render it self-defeating.)

Okinawa on the other hand, with nature, sunshine and conviviality to spare, somehow went astray. For years it was Japan's longest-living prefecture. Women still do well, ranking 3rd nationwide, but men have fallen to 30th place. The Westernized diet gets the largest share of the blame, with the stress of hosting military installations likely a close second. Too much fast food, too little exercise. "I see this as where Japan as a whole is heading," Dr. Kazuhiro Nagao tells Sapio.

Laugh. It's good for you, as was shown above, and life is funny, if you look at it correctly. Liberals, it seems, live longer than conservatives. Does that make sense? Maybe it does: the conservative fight to preserve the past is doomed and conservatives must, deep down, know it. Fighting losing battles, however meritorious, takes its toll. So does poverty, and it's no surprise to find the rich living longer than the poor – but interestingly enough, rich people with solid academic records live longer than rich people who were mediocre scholars. Intellectual capacity may be life-enhancing, but why should it should be life-prolonging? Maybe for that reason. On the other hand, the intellectually dull spare themselves a lot of the ulcerous anxiety that plagues the intellectually sharp.

Cancer, the scourge of the body as dementia is of the mind, varies remarkably by region. Akita, Niigata, Yamagata and Ishikawa Prefectures are notorious for stomach cancer. All are on the Sea of Japan, all are snowed in in winter, and all, consequently, have diets heavy on pickles and therefore salt.

Bowel cancer rages in Akita, Aomori, Kyoto and Wakayama Prefectures; lung cancer in Wakayama and Ishikawa Prefectures; liver cancer in Fukuoka, Osaka and Wakayama Prefectures. Tokyo is tops in breast cancer, against which female hormones are the best defense, leaving busy urban women who don't give birth especially vulnerable, Sapio hears from its medical sources.

A final anomaly: cancer death rates tend to be lower in prefectures where cancer rates are highest. That's where the best care is to be found.

<https://japantoday.com/category/features/kuchikomi/japan-an-unhealthy-longevity-superpower>

Loving Homework
By Anthony Fensom

Homework is the bane of schoolchildren worldwide, but is still pushed on kids by parents and educators. Is the battle really necessary?

Getting up at six o'clock in the morning again to do homework on a weekday, my 9-year-old daughter declared she was finished with extra study.

“When kids rule the world, there will be no homework,” she proclaimed.

With that day yet to arrive, kids around the world are still racking up plenty of hours on homework. According to a recent study by the Organization for Economic Cooperation and Development, kids in Shanghai top the global study league with an average of 13.8 hours per week, nearly three times the OECD average of 4.9 hours.

Children in Australia and the United States did around six hours a week of homework set by teachers, while those in Japan reported a surprisingly low 3.8 hours. However, Japanese kids do a lot more extra work in juku (cram) tuition, which helps prepare for future school entrance examinations.

Does all that extra work pay off? Based on the latest 2012 Program for International Student Assessment (PISA) survey of 15-year-old students, Asian teens outperformed the rest of the world, with those in Shanghai, Singapore, Hong Kong, Taiwan, South Korea, Macau and Japan the top performers.

Among the OECD countries that took part in PISA, Japan ranked first in reading and science and second in mathematics performance, continuing its strong record. By contrast, Australian students ranked 17th in math, 10th in reading and eighth in science, falling further behind its Asian neighbors.

And when it comes to our kids' future, studying more pays off in the long run. A tertiary-educated worker in Japan typically earns around 52 percent more over the course of his or her working life than someone whose highest qualification is high school.

Japan even has its own special play school for future workers. At Tokyo's KidZania, “a land of kids, by kids, for kids,” children can try out more than 80 different jobs, including being a doctor, firefighter or journalist.

But all work and no play makes Jack (or Taro) a dull boy. Researchers advise parents to spend time on physical activity with their kids, to ensure children lead healthy lifestyles.

So next time your kids complain about homework, just remind them it is for their ultimate benefit. But also spend time having a walk, run or swim, because kids need all the power they can get to rule the world.

<http://st.japantimes.co.jp/essay/?p=ey20141107>

Ministry steps up labor crackdown on 'overworked, underpaid' university students

BY TOMOHIRO OSAKI, STAFF WRITER, JAN 4, 2016

The Health, Labor and Welfare Ministry has stepped up its fight against black baito, or exploitative part-time jobs, amid claims more firms are underpaying and overworking university students to cut costs.

In the latest move in its months-long campaign to crack down on the practice, the ministry last month warned industry and business lobby groups to improve the treatment of students who are often forced to work marathon shifts in difficult conditions.

Fueling concerns is the view that businesses have grown increasingly reliant on part-time workers, instead of full-time staff, in a bid to cut back on personnel costs.

Students, meanwhile, are said to often find it difficult to quit such jobs, desperate to make a living as they grapple with increasing poverty and soaring tuitions.

A ministry survey last summer of 1,000 university and vocational school students across the nation exposed legal malpractice over their part-time jobs, such as unpaid overtime and contract breaches.

In the survey, 58.7 percent of students answered that their employers hadn't explained to them in writing the details of their working conditions.

A total of 60.5 percent, meanwhile, said they found themselves in some trouble with employers, such as being denied pay or forced to work without a break.

Among industry groups subject to the ministry's warning are associations linked to the nation's juku (cram school) business, such as Japan Juku Association and All Nippon Shijuku Educational Network.

In the juku industry, considered one of the most popular lines of work for university students, jobs include working as private tutors or teaching a whole class of elementary or junior high school students.

Last March, the ministry warned the cram school industry to improve its treatment of university students. But that warning, the ministry said in last month's new edict, went unheeded, with allegations continuing that the young teachers are not properly made aware of their working conditions before they start or denied salary for the time they spend drawing up mandatory reports and answering questions from students outside classroom hours.

Such maltreatment of university students, the ministry said, could compromise their academic activities.

"Aside from meeting minimum working standards, the employers must ensure that the students can achieve a balance between working part-time and pursuing their academic activities," the ministry said in a statement released Dec. 25.

Other industry groups singled out by the ministry for criticism included the Japan Franchise Association, All Japan Supermarket Association and Japan Chain Stores Association.

The ministry also urged business and commercial groups, including Keidanren and the Japan Chamber of Commerce and Industry to better educate employers on the importance of students being able to fulfill their academic requirements.

<http://www.japantimes.co.jp/news/2016/01/04/national/ministry-steps-labor-crackdown-overworked-under-paid-university-students/#.VooxGvl95D>

Death Sentences and Executions 2014 SUMMARY

Amnesty International recorded executions in 22 countries in 2014, the same number as in 2013. At least 607 executions were carried out worldwide, a decrease of almost 22% compared with 2013. As in previous years, this figure does not include the number of people executed in China, where data on the death penalty is treated as a state secret. At least 2,466 people are known to have been sentenced to death in 2014, an increase of 28% compared with 2013. This increase was largely due to sharp spikes in death sentences in Egypt and Nigeria, where courts imposed mass sentences against scores of people in some cases.

An alarming number of countries that used the death penalty in 2014 did so in response to real or perceived threats to state security and public safety posed by terrorism, crime or internal instability. For example, Pakistan lifted a six-year-long moratorium on the execution of civilians in the wake of the horrific Peshawar school attack. The government also pledged to execute hundreds of people on death row who had been convicted on terrorism-related charges. China made use of the death penalty as a tool in the “Strike Hard” campaign, which the authorities characterized as a response to terrorism and violent crime in the Xinjiang Uighur Autonomous Region.

There is no evidence that the death penalty has a greater deterrent effect on crime than terms of imprisonment. Where governments present the death penalty as a solution to crime or insecurity they are not only misleading the public but – in many cases – failing to take steps to realize the goal of abolition recognized in international law.

Many of those states that retain the death penalty continued to use it in contravention of international law and standards. Unfair trials, “confessions” extracted through torture or other ill-treatment, the use of the death penalty against juveniles and people with mental or intellectual disabilities, and for crimes other than “intentional killing” continued to be concerning features of the use of the death penalty in 2014.

Despite these concerns, the world continues to make progress towards abolition. With the exception of Europe and Central Asia region, where Belarus – the only country in the region that executes – resumed executions after a 24-month hiatus, Amnesty International documented positive developments in all regions of the world. The Sub-Saharan Africa region saw particular progress, with 46 executions recorded in three countries, compared to 64 executions in five countries in 2013 – a 28% reduction. The number of executions recorded in the Middle East and North Africa region decreased by approximately 23% - from 638 in 2013 to 491 in 2014. In the Americas, the USA is the only country that executes, but executions dropped from 39 in 2013 to 35 in 2014, reflecting a steady decline in executions over recent years. The state of Washington imposed a moratorium on executions. Fewer executions were recorded in the Asia-Pacific region, excluding China, and debates on abolition began in Fiji, South Korea and Thailand.

<https://www.amnesty.org/en/documents/act50/0001/2015/en/>

Chinese Factory Replaces 90% of Humans With Robots, Production Soars

By Conner Forrest July 30, 2015,

The gravest fear that has rippled through humanity from the technology industry is that, someday, almost all of our jobs will be replaced by robots.

While that fear is often laughed off as something that will only happen far into the future, the truth is that it's actually happening right now.

In Dongguan City, located in the central Guangdong province of China, a technology company has set up a factory run almost exclusively by robots, and the results are fascinating.

The Changying Precision Technology Company factory in Dongguan has automated production lines that use robotic arms to produce parts for cell phones. The factory also has automated machining equipment, autonomous transport trucks, and other automated equipment in the warehouse.

There are still people working at the factory, though. Three workers check and monitor each production line and there are other employees who monitor a computer control system. Previously, there were 650 employees at the factory. With the new robots, there's now only 60. Luo Weiqiang, general manager of the company, told the People's Daily that the number of employees could drop to 20 in the future.

The robots have produced almost three times as many pieces as were produced before. According to the People's Daily, production per person has increased from 8,000 pieces to 21,000 pieces. That's a 162.5% increase.

The increased production rate hasn't come at the cost of quality either. In fact, quality has improved. Before the robots, the product defect rate was 25%, now it is below 5%.

Shenzhen Evenwin Precision Technology, also based in Dongguan, announced a similar effort in May 2015. This region of China is often referred to as the "world's workshop" due to the high number of factories located there.

The shift happening with automation has been in the works for many similar companies in the area for quite some time. Foxconn, the controversial manufacturer of many gadgets such as the iPhone and iPad announced its robot initiative back in 2011.

Dongguan is about an hour's car ride north of Shenzhen, which is widely regarded as one of the top regions in the world for gadget manufacturing. The growth of robotics in the area's factories comes amidst a particularly harsh climate around factory worker conditions, highlighted by strikes in the area. One can only wonder whether automation will add fuel to the fire or quell some of the unrest.

Some of the influx of robotics in the region is due to the Made in China 2025 initiative, and we will continue to see automation affect the area and potentially reduce the number of manufacturing jobs. Additionally, in March, 2015, the Guangdong government announced a three year plan to increase automation in the region by subsidizing the purchase of robots.

According to the International Federation of Robotics (IFR), electronics production was one of the biggest growth drivers for the sales of industrial robots. China was the largest market for industrial robotics in 2014 with nearly 60,000 robots sold.

<http://www.techrepublic.com/article/chinese-factory-replaces-90-of-humans-with-robots-production-soars/>

‘Superhuman’ slugger tops year’s list of buzzwords

BY DAISUKE KIKUCHI, STAFF WRITER

A superhuman effort on the baseball field inspired the top buzzword of the year, it was announced Thursday, in a contest that highlights social, political and entertainment trends.

The winning entry was *kamitteru*, or superhuman behavior, honoring the clutch performance of Hiroshima Toyo Carp outfielder Seiya Suzuki.

The phrase was used by the team’s manager, Koichi Ogata, when Suzuki hit a game-ending home run for the second straight day against the Orix Buffaloes in June.

“I’m not the one who said *kamitteru*, so it’s a bit difficult to react, but I’m very happy about it,” Suzuki said at an awards ceremony held at the Imperial Hotel in Tokyo’s Chiyoda Ward.

His team won this year’s Central League championship for the first time in 25 years. “I will never forget that *kamitteru* was awarded in a great year for Hiroshima Toyo Carp,” he said.

The Jiyukokuminsha publishing house also announced nine other winners in the 2016 U-Can Shingo Ryukogo Taisho (2016 U-Can New Words and Buzzwords Awards).

Winners last year included phrases pointed at Prime Minister Shinzo Abe, such as *Abe seiji wo yurusanai* (We will not tolerate Abe’s politics) on the Diet’s passage of controversial security bills, as well as “SEALDs,” based on the massive protests organized by the bills’ opponents.

Another winner was *Hoikuen ochita. Nihon shine* (Didn’t get a day care slot. Drop dead, Japan) targets Abe’s *ichioku sokatsuyaku shakai* (dynamic engagement of all citizens) plan. The remark was used in a blog post penned by an anonymous writer who was angry with the ongoing day care shortage. Becoming a hot topic, it made its way into debates in the Diet and triggered promises of legislative change from lawmakers.

Two entertainment buzzwords were also selected as winners: PPAP (Pen-Pineapple-Apple-Pen), a smash-hit video by comedian Pikotaro that earned Guinness World Record honors as the shortest song to break the Billboard Hot 100, and “Pokemon Go,” an augmented reality smartphone game that appealed to both hardcore and casual players of all ages.

The editorial team of the weekly Shukan Bunshun magazine was also recognized for the buzzword *gesu furin* (sleazy affairs), in response to the magazine's many scoops this year on adultery committed by celebrities.

Other winners include *seichi junrei* (holy pilgrimage), *Toranpu gensho* (The Trump phenomenon), *amoore* (love), *mainasu kinri* (negative interest rates) and *morido* (layer of clean soil).

The six-member selection committee included political scientist Kang Sang-jung, poet Machi Tawara and manga author Mitsuru Yaku. The group was without its former leader Shuntaro Torigoe, a journalist who was defeated by Yuriko Koike in this year's Tokyo gubernatorial election.

<http://www.japantimes.co.jp/news/2016/12/01/national/superhuman-slugger-tops-years-list-buzzwords/#.WUox9euGOUk>

Sleep deprivation has genetic consequences

Effects from disruption of DNA expression will take years to detail
BY DAVID BROWN, THE WASHINGTON POST

WASHINGTON – Hey, you, yawning at 2 in the afternoon. Your genes feel it, too. A new study, paid for by the U.S. Air Force but relevant for anyone with a small child, a large prostate or a lot on the mind, is helping illuminate what happens at the genetic level when we don't get enough sleep.

It turns out that chronic sleep deprivation — in this experiment, less than six hours a night for a week — changes the activity of about 700 genes, which is roughly 3 percent of all we carry.

About one-third of the affected genes are ramped up when we go with insufficient sleep night after night. The other two-thirds are partially suppressed. Hundreds of “circadian genes” whose activity rises and falls each day lose their rhythm.

Among the genes disturbed by sleep deprivation are ones involved in metabolism, immunity, inflammation, hormone response, the expression of other genes and the organization of material called chromatin on chromosomes. These changes may help explain how inadequate sleep alters attention and thinking and raises the risk for illnesses such as diabetes and coronary heart disease.

“The findings will identify some of the pathways linking insufficient sleep and negative health outcomes,” said Derk-Jan Dijk, a physiologist at the University of Surrey in England, who led the study. “But how these things ultimately lead to obesity or diabetes is an unanswered question at this moment.”

The experiment's results are “consistent with what we know from animal studies,” said James Krueger, a sleep researcher at Washington State University. “But until you do it in a human, you don't know. We now have a survey of what genes are affected in humans by chronic sleep loss.”

Cognitive, heart troubles

What is clear is that inadequate sleep is a big problem. In the federal government's periodic National Health and Nutrition Examination Survey, 37 percent of adults in 2008 reported “inadequate sleep” and 29 percent “severe sleep deprivation.” In a different survey in 2010, about 30 percent of employed adults reported sleeping six hours or less each day. Among night-shift workers, the prevalence of “short sleep” was 44 percent — and in those in warehousing and transportation, it was 70 percent.

A two-decade study of Wisconsin parents published last month found that 41 percent of parents of children younger than 18 slept for less than seven hours each night, and 8 percent for less than six hours. Only 31 percent of American high school students sleep eight hours on an average school night.

Sleeplessness has big consequences, too. The biggest is that it makes people sleepy. “We have looked at the behavioral response to this kind of manipulation (sleep deprivation) in great detail,” Dijk said. “Sustained attention, reaction time, working memory — we see effects on all of them.”

Cognitive performance, however, is just the most predictable and immediate problem. Others are rare or take years to develop.

Short duration of sleep is associated with a higher risk of developing heart disease and stroke. People sleeping less than six hours a day are twice as likely to have Type 2 diabetes as people sleeping eight hours. Dozens of studies in many countries have found a relationship between short sleep and obesity.

People who sleep less than seven hours a night have a slightly higher risk of dying prematurely. (Interestingly, for people sleeping more than nine hours a night, the increase in risk is higher.) At least 2.5 percent of fatal car crashes involve “drowsy driving” — and some experts believe the real number is 10 times higher.

For most of these health effects, no one knows whether sleep deprivation causes the problem or is merely associated with it. The gene survey may help provide answers.

Body rhythms disrupted

The Surrey experiment, whose results appear in the Proceedings of the National Academy of Sciences, examined two types of sleep deprivation: acute and chronic.

Dijk, Colin Smith, Carla Moller-Levet and their colleagues found that the six-hour sleep nights changed the level of transcripts of 711 genes; it was reduced in about 450 and increased in about 250.

The effects of those changes are hard to predict. A few are obvious, such as the increase of certain inflammation-causing cytokines in the bloodstream. But for many, the consequences of the changes in gene expression will require lots of study to figure out.

Chronic sleep deprivation also affected 1,855 circadian genes (which are about 9 percent of all genes). In circadian genes, the number of RNA transcripts rises and falls on a predictable 24-hour cycle. After a week of insufficient sleep, however, only 1,481 were still oscillating. In many of them, both the number of transcripts and the time of peak activity were different.

The researchers also identified genes whose activity depended on how long a person stayed awake. After a week of good sleep and then 40 hours of no sleep, there were 122 such genes. After a week of bad sleep, that number was up to 856.

In other words, not enough sleep day after day throws a lot of things off.

As with many important experiments, the one in Surrey raises as many questions as it answers. What effect does a nap have? Does a weekend of normal sleep reset the system? Do the gene-expression profiles get worse with longer periods of chronic sleep loss? Does what Dinges calls the “yo-yo lifestyle” of sleep restriction and recovery cause lasting physiological damage?

Sleep researchers will try to answer those questions next.

Adapted from:

<http://www.japantimes.co.jp/news/2013/03/08/world/science-health-world/sleep-deprivation-has-genetic-consequences/#.Vc0yz2AVfFI>

The Four Seasons in Japan

The Japanese make a lot of the fact that they have four distinct seasons - as if it was something unique to their country. Actually, the fact that the archipelago covers several climatic zones and is caught between the Asian continent and the Pacific does cause dramatic mood swings in the weather. Cold, dry winters and hot, humid summers can be found all over the world but there are certain seasonal treats that only Japan can offer and others that have their own local twist.

Winter

The snows of winter are eagerly awaited by skiers and snowboarders, who fill popular resorts such as Hakuba and Naeba and parade the latest fashions on the slopes. Winter sports have become hugely popular in recent years and the 1998 Winter Olympics held in Nagano were hugely successful. The Yuki Matsuri (snow festival) held in Sapporo every February attracts thousands of tourists from Japan and abroad. The chilly weather takes its toll on the nation's health and it's common to see people wearing white gauze masks over their mouths. The masks are not to protect the wearer but rather to prevent others from catching the cold - very considerate.



Mt. Fuji can be seen at its majestic best in the clear air of winter



The cherry blossom, Japan's national flower, is also a symbol of life's transience

Spring

In spring, one of the best-loved symbols of Japan makes a dramatic sweep across the country. Sakura (cherry blossoms) bloom usually from the end of March through April in a kind of wave starting in southern Kyushu and working its way northeast. News reports keep the populace up to date on the best places to enjoy hanami (lit. flower viewing). The hanami tradition has been popular since the Heian Period (794-1185) and is a good example of the Japanese view of beauty in nature. The undeniable beauty of the delicate pink flowers is offset by a sense of melancholy at their all-too-brief appearance. This is often compared to our own short time spent on the earth. This mixture of feelings is best expressed when completely drunk, of course. And so every year, hundreds of thousands of Japanese of all ages gather beneath the pink blooms, sing karaoke, dance and drink till they fall over. Ironically, one popular hanami spot in Tokyo is the Aoyama Bochi (cemetery). Those resting under the rows of tombstones are almost forgotten as they are sprinkled with falling blossoms and the occasional spilled beer. See our hanami page for more.

Tsuyu

Though not counted as one of the four seasons, there is enough rain in June for it to be called tsuyu (the rainy season). Ajisai (hydrangea) blooms turn a pale lilac and then a deep blue as the rain continues to fall. Japanese people seem to have a bit of a rain phobia at the best of times, judging from how quick they are to use their umbrellas, but at this time of year, trying to manoeuvre through thousands of the things is a life-threatening experience. And no sooner has the rain showed signs of easing than the thermometer and hydrometer go through the roof and the hot, humid summer is underway.



The blue flowers of the hydrangea signal the coming of the rainy season



Suikawari - Split the Watermelon - is a popular summer beach game

Summer

In summer, temperatures get to the mid-30's in most areas and the humidity can be unbearable. Only Hokkaido is spared the worst of the extremes. At the weekend, people flock in their thousands to the beaches or to the relative cool of the mountains. Summer is also the season of matsuri (festivals) and hanabi (fireworks). The biggest festival of the year, Obon is held in August (July in some areas). The annual hanabi taikai (fireworks display) held on the Sumida River in Tokyo is hugely popular, drawing over a million and a half people every year. Started in 1733 by rival firework makers Tamaya and Kagiya, the dramatic and exhilarating explosions still draw excited shouts of 'Tamaya!' and 'Kagiya!' from the crowd. Although schools are on vacation in July and August, high school baseball teams are busy vying for a chance to represent their prefecture at the baseball championship held at Koshien Stadium in Hyogo Prefecture. The event is eagerly followed by the whole country.

Autumn

The end of summer and beginning of autumn sees the arrival from the Pacific of typhoons, tropical storms equivalent to hurricanes in the West. Most typhoons hit the Kyushu region first and then proceed across the country, wreaking havoc. Some of the worst typhoons have killed thousands of people. A typhoon was also responsible for sinking the fleet of the invading Mongols in the 13th century, earning itself the name kamikaze (divine wind). September is the time for tsukimi (moon viewing). Like hanami, it is a tradition dating from the Heian Period although it is not as popular today. As the weather cools in October and November, leaves begin to change color and suddenly the landscape is a dramatic palette of red, brown, orange, yellow and green. The koyo (red leaves) of late autumn are an often breathtaking sight, especially against a backdrop of Mt Fuji or a temple in Kyoto.



Just a sample of the spectacular koyo colors that await you in Kyoto



An aerial view of the autumnal colors at Lake Chuzenji, near Nikko, Tochigi Prefecture

<http://www.japan-zone.com/culture/season.shtml>

Japanese Women Face Tough Reality in Work and Marriage

Kawaguchi Akira

Despite much-trumpeted policies aiming to encourage female participation in the workforce, Japanese women must contend with both an economic gender gap and the gap between their aspirations and the reality for careers and marriage. Gender studies specialist Kawaguchi Akira assembles a range of data to analyze the situation for women in Japan today.

Japan's Persistent Gender Gap

In the *Global Gender Gap Report 2014*, published by the World Economic Forum, Japan **ranked 102nd** out of 142 countries for economic participation and opportunity (104th overall). Japan scored at a consistently low level for a major developed nation, with a female-to-male ratio of 0.12 for legislators, senior officials, and managers (112th); 0.75 for labor force participation (83rd); 0.87 for professional and technical workers (78th); 0.60 for estimated earned income (74th); and 0.68 for wage equality for similar work (53rd). Since the first report was published in 2006, it has made no tangible improvement.

The Equal Employment Opportunity Act was passed 30 years ago. While it cannot be denied that there has been some progress in raising the economic status of Japanese women in that time, other developed countries have achieved a faster reduction in the gender gap.

Traditional Roles and Corporate Discrimination

There are two main reasons for the size of Japan's economic gender gap. First, the traditional roles of the husband as breadwinner and the wife as homemaker retain a strong influence. The employment rate for women with children less than three years old is only 30%, which is extremely low compared with the 52% average for members of the Organization for Economic Cooperation and Development.^(*) As women are expected to take on the bulk of responsibility for housework and raising children, it is difficult for them to establish a career path.

The second reason is corporate discrimination against women. Most Japanese companies have internal training systems that are based on lifelong employment. Under these systems, companies hire new graduates and spend time training them, transferring them regularly every few years. For companies with nationwide operations, it is common for each transfer to require relocation. The systems are unfavorable to women, many of whom are unable to leave their families and transfer to other locations and end up quitting their jobs instead. For these reasons, women are discriminated against in the recruitment process, and even if they are hired, they are not given the same opportunities as male employees in terms of position, training, and promotion.

A typical form of discrimination can be seen in the personnel management systems adopted by around half of major corporations, which divide employees into different career tracks. New staff members are recruited into either the *sōgōshoku* (managerial) or *ippanshoku* (general clerical) track. The former usually involves transfers between different offices and leads to management positions, while the latter has no transfers, but no possibility of promotion to management level.

In 2012, 72% of corporations hiring personnel for a *sōgōshoku* track requiring transfer between locations stated that more than 80% of their hires in that category were male. In the same survey, 52% of corporations with an *ippanshoku* track stated that more than 80% of employees hired for this track were female.^{(*)2} In other words, the two-track system is effectively used to divide employees by gender. Japan is the only developed country where this kind of loophole is openly in use.

Higher Female Employment Due to Nonregular Rise

The employment rate for women is rising, albeit slowly. In 1990, shortly before the bursting of the bubble economy, 56% of women aged 15–65 were in employment. By 2014 this figure had risen to 64%. Meanwhile, the male employment rate remained around the same during this period.

The higher female employment rate does not necessarily mean, however, that women are winning more opportunities to apply their abilities. In fact, in roughly the same period, from 1990 to 2015, the number of women in regular employment fell by 3.3% from 10.50 million to 10.15 million. By contrast, the number of women in nonregular positions more than doubled from 6.46 million to 13.43 million.^{(*)3} The increase in female employment can be wholly attributed to women in nonregular positions, and this rise is the single greatest factor in perpetuating wage differences between men and women.

Falling Wages for Men Push Women into Workplace

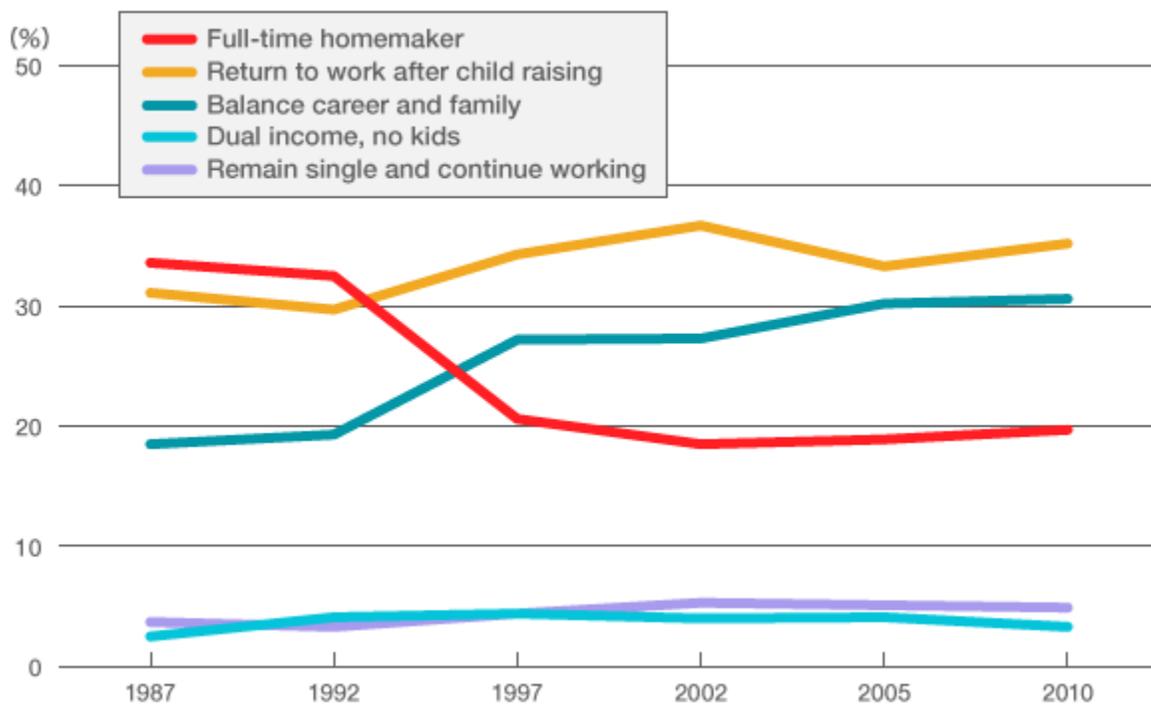
Lower wages for men have helped to push up the female employment rate. Salaries for men in regular positions have remained stagnant since the collapse of the bubble economy in the early 1990s, and the number of male nonregular positions has soared. There were 2.35 million more men in temporary or fixed-term contract jobs in 2014 than there were in 1990, representing an increase of 171%. The decreased income for male employees has caused increased female employment in the following two ways.

One is that more men are unable to marry due to their low income, meaning that both men and women marry later or not at all. As a result, there are unmarried women who remain in employment. Another is that married couples cannot maintain the kind of lifestyle that was once possible on the husband's salary alone, so it is more common for both partners to work. Many women who continue to work after marriage quit their jobs to have children and then return to employment in part-time positions when their children are older, increasing the number of nonregular employees.

The Gap Between Ideals and Reality

Do Japanese women actually want to work? A 2010 survey of single men and women conducted by the National Institute of Population and Social Security Research found that the most popular imagined future life course among single women was to leave work after getting married or to have children and then to return to work after a period of child raising, with 35% choosing this “return-to-work” option. The next most popular was to go on working as well as getting married and having children; 31% of single women hoped they could balance career and family in this way. In third place, 20% wished to become full-time homemakers after marriage or childbirth. Only 5% wanted to remain single and continue working, and just 3% hoped to get married but have no children (dual income, no kids).^(*)

Single Japanese Women’s Ideal Future Life Course



Source: National Institute of Population and Social Security Research, *Shusseī dōkō kihon chōsa* (National Fertility Survey) (2010).

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As well as asking about single women’s ideals for their future, the same survey asked about their expected life course. There is a striking gap between ideals and expectations in some of these areas. While 20% of single women hoped to become full-time homemakers, only 9% believed this would actually happen. Similarly, although 31% wished to balance career and family, just 25% expected their lives to turn out in this way.

On the other hand, many single women believed that remaining unmarried was more likely than they hoped, with 5% seeing this as an ideal but 18% imagining it as the most likely outcome. In other words, many women believed they would be unable to get married even though they wanted to do so.

Harder to Marry

When it comes to changing attitudes to marriage and work, the clearest transformation from the 1987 to the 2010 survey can be seen in the attitudes of men rather than women. In 1987, 38% of single men wished their future wives to be full-time homemakers, but that ratio had dropped to 11% by 2010. Over the same period, the ratio of men who hoped that their partners would continue their careers rose from 11% to 33%. While there were once many men who expected their wives to stay at home, they have become increasingly rare.

Meanwhile, the 34% of women who wished to be full-time housewives in 1987 fell to 20% in 2010. By contrast, the proportion who wanted to balance family and career rose from 19% to 31%. Trends for expectations were similar, with those predicting a future as a full-time homemaker sliding from 24% to 9% and those who saw their likely role as balancing family and career increasing from 15% to 25%. The highest rise in women's expected future paths, however, was for the pattern of remaining single and continuing to work (from 7% to 18%). If it is hard to be a full-time homemaker, it is certainly not easy to balance a job with housework and raising children. But above all else, in present-day Japan just getting married itself is becoming more and more difficult.

(Originally written in Japanese on July 21, 2015, and published on August 5, 2015. Banner photo © Jiji.)

(*1) ^ OECD Employment Outlook 2014.

(*2) ^ Ministry of Health, Labor, and Welfare, *Koyō kintō kihon chōsa* (Basic Survey of Gender Equality in Employment Management) (2012).

(*3) ^ Ministry of Internal Affairs and Communications, *Rōdōryoku chōsa* (Labor Force Survey) (2015).

(*4) ^ National Institute of Population and Social Security Research, *Dai 14 kai shussei dōkō kihon chōsa (kekkon to shussan ni kansuru zenkoku chōsa)* (The Fourteenth Japanese National Fertility Survey: Attitudes toward Marriage and Family among Japanese Singles) (2010).

<http://www.nippon.com/en/in-depth/a04601/>

Ramen vs. “Washoku”: The Changing Face of Japanese Cuisine
Barak Kushner

Ramen has gone global, with more and more shops opening up worldwide in the twenty-first century just as they spread rapidly throughout Japan in the twentieth. Yet the upstart noodle dish’s place within Japanese cuisine is still ambiguous. It stands as a kind of rival to the more established tradition of “washoku,” recognized by UNESCO as an intangible cultural heritage in 2013.

At the end of 2000, Harvard anthropologist Ted Bestor penned a seminal article in *Foreign Policy* on how sushi was going global. Bestor noted that although Japanese cuisine was off the radar for most international diners until recently, by the start of the twenty-first century, eating sushi had acquired the patina of cosmopolitanism. By December 2013, international attitudes toward Japanese food had shifted to the point that the world reverberated to the announcement that traditional Japanese cuisine, distinctly hard to define though labelled as washoku, had succeeded in gaining the support of UNESCO as an intangible cultural heritage.

This is all heady stuff because we should remember that with few exceptions, Westerners loathed Japanese dining, and vice versa, for most of recent history—and the Chinese did not think too highly of it either, for the most part. In 1854, when Matthew Perry’s black ships reappeared on Japan’s shores, the mission hosted Japanese shōgunate officials on the USS *Powhatan* to what the Americans considered a rich feast. As expected, the Japanese returned the favor several weeks later but Japan’s first foray into international banqueting was a culinary disaster. The American sailors found most of the food inedible and “too fishy.” In the official nineteenth-century log of the trip, Perry and his men report being unimpressed by the quantity and taste of Japanese food. Examples like this abound on both sides of the ocean, leading us to conclude that much has changed—Western palates have adapted and so has the content of Japanese cuisine itself.

Regardless of all the rhetoric, Japan’s “gastronationalism,” or extreme pride in its own food, is a rather recent development. It would be hard to argue that the Japanese today eat as they did 150, 100, or even 50 years ago. The consumption of sugar, eggs, meat of varying kinds, and wheat products has skyrocketed, whereas rice consumption continues to decline steadily in the postwar era.

A Sea of Ramen

The 2012 book *Slurp!* explores the history of ramen from Chinese origins to its place in modern Japanese pop culture.

After I wrote my ramen history *Slurp!* I was asked by more than a fair share of Japanese newspapers and publishers, why now? Why was there a boom in ramen sales in the West, or in Japan for that matter?

In contrast to the stereotype of a delicate and fairly bland washoku, contemporary Japan almost floats on a sea of various forms of ramen. Currently, the world devours close to 103 billion packages of instant ramen a year, and ramen accounts for a significant portion of meals eaten outside the home in Japan. At last count there were tens of thousands of ramen shops throughout Japan, as well as films, cartoons, songs, television shows, magazines, books and blogs—a virtual avalanche of popular culture, all focusing on ramen. This is now starting to trickle out to the rest of the world—there is a Michelin-starred ramen restaurant in Hong Kong and a recent surge in ramen dining in London, which supposedly has more than 20 shops. A young entrepreneur in London, Aaron Resch, completed his MBA with a dissertation on how to open a ramen franchise. His own ramen shop combines classic tastes and those based on more conservative British tastes, such as “Bulldog Ramen,” featuring beef and Yorkshire pudding. Ivan Orkin, whom I interviewed back in 2009, has parlayed being a gaijin who cooks up ramen into an international phenomenon, boasting devoted followers in Tokyo and New York City. Ramen has gone global. But is it Japanese?

Why has ramen perhaps taken over as the archetypal example of Japanese food even though it is apparently considered insufficiently Japanese to be listed as such in the UNESCO application? Is ramen popular because it is full of umami, or due to some other factors? We should note that the entire ramen boom, which really took off in the early 1990s, intersects with the precise downturn of the Japanese economy and the rise of what has been labelled as Japan’s “lost decades.” In short, the international ramen explosion that is now happening has less to do with government promotion and the limited success of establishing washoku as a world cuisine and more to do, perhaps, with the fact that, like the sandwich, ramen is a “platform food” that can easily be adapted to local tastes.

Ramen is Japan! To many, it embodies the culmination of the country’s postwar history. The noodle soup has left an indelible mark on Japanese society and fused itself so tightly to contemporary culture that a Japan without ramen is unthinkable, as several corporate executives and ramen consultants told me in interviews. It is not just because ramen is a tasty diversion but more because ramen itself has become a staple consumer element deeply tied into popular culture and is, more importantly, a face of Japan to the wider world. Like Sony, Toyota, and Panasonic, the rise of ramen parallels Japan’s rise from the ashes of World War II into an economic powerhouse. And it is not only Japanese who have made this connection between ramen and their country’s popular culture. A cursory look at how ramen is sold around the world demonstrates that selling ramen as a Japanese product is good for sales. In Taiwan, a country with its own long noodle traditions, ramen is often expressly sold as *rishi* or in the “Japanese style,” to set it apart from native competitors. And it is frequently more expensive as well.

I propose that ramen has successfully developed, in a way different from sushi and other “exotic” Japanese foods, as an item linked to locale and popular culture. In addition, ramen has now become a “brand idea” in Japan, specifically shaping and promoting certain regional characteristics in the minds of consumers as a way of divvying up the dizzying homogeneity of contemporary Japan.

In Search of Local Flavors

In Japan, the new food paradigm of *gotōchi* has emerged—essentially a search for the greatest delicacy in each region. The Japanese have now tied consuming food into its own form of popular culture so that the pursuit of delightful eating has evolved into a national pastime. This “food tourism” has become a stand-in for other forms of entertainment. The hobby can also be attributed largely to two factors: the increasing homogenization of the Japanese hinterland and the need for regions beyond the megacities to compete for revenue. While the overall population of Japan is decreasing, the percentage of those living in the three major cities—Tokyo, Nagoya, and Osaka—continues to rise. This geography of change in Japan was further accelerated by the *Heisei daigappei*, a series of administrative mergers in the Heisei era (1989–), which saw the number of municipalities reduced from 3,232 in 1999 to 1,730 in 2010. This meant that the concept of a unique and local flavor virtually halved over a decade in most of the country.

One way to combat this inexorable population exodus/amalgamation and subvert the ensuing economic decline in Japan’s periphery over the last two decades has been to promote local cuisine. With the advent of local branding, there is now a B gourmet Grand Prix, launched in 2006 and hosted annually. As its website illuminates, this competition is not about the food or sales but rather about publicity for the locales themselves, through food. There is almost no greater contender in this regional race for distinction than ramen, which already had a loyal following. Mirroring a trend among ramen producers during the early years of ramen’s growth during the 1920s, the establishments utilize their “local flavor” as a vehicle to distinguish their product from others. According to the Ministry of Agriculture, Forestry, and Fisheries, there is a fantastic economic incentive to participate in such measures to boost local cuisines as a product that already has won acclaim.

Endorsing “Authenticity”

Postwar Japan is a hybrid conglomeration of tastes and cultural influences, just as it was during the early Meiji era (1868–1912), with Chinese compradors and Western businessmen. As the French bask in their gustatory glory and British ponder their national cuisine, Japan’s reactions to the international rise in stature of its national cuisine(s) appear at best ambivalent. Ramen has taken the world by storm but its popularity has also caused uneasiness. Some Japanese felt threatened by the fact that their supposedly unique diet was now available throughout the world and at first waffled in the face of this new culinary fame.

In 2006, the Japanese government announced its intention to consider a licensing system to standardize and authorize what Japanese officials believed were “authentic and qualified” Japanese restaurants, as opposed to those “wholly unconnected to Japan.” A web link allowed patrons of any restaurant abroad to report on the “Japanese” quality of their dining experience to help the ministerial department collect data. What exactly denoted “Japanese” quality remained unclear, though, and the plan was soon quashed.

However, the plans also called into question long-held and perhaps inadequate beliefs about the timelessness of Japanese cuisine. Indeed, one of the major ideological shifts in identity during the Taishō era (1912–26) was the incorporation and consumption of Chinese food and its influence on the Japanese cuisine and diet, even as the very concept of Japanese cuisine was forming. Japanese cuisine, once thought to be so unique and rather grotesque outside of Japan, now dominates plates across the world. The sticking point, however, remains a discussion about what dishes should represent this transformation—washoku or ramen—given that both supposedly are Japanese. The Japanese themselves often seem confused—in a 2007 questionnaire of Japanese returning from abroad, the largest percentage of Japanese wanted to eat their national “comfort food.” This was not sushi or soba or some element of washoku, but ramen. Ramen arguably now defines how the Japanese eat and has become a mainstay of how the rest of the world views it. We would do well to heed the evolution of Japanese cuisine and see it for what it is—an invented tradition that is in constant change, not a timeless museum artifact.

(Originally written in English on June 19, 2015. Banner photo © The New York Times/Aflo)

<http://www.nippon.com/en/features/c02203/>

Education ministry panel wants more emphasis on English conversation skills

JIJI, KYODO AUG 1, 2016

The education ministry will put more emphasis on conversation skills in teaching English in hopes of producing people who can communicate effectively in the language, according to a draft outline of revised school curriculum guidelines.

The draft includes moving up the starting year for English education to third grade in elementary school from the current fifth.

It says conventional English classes have been placing emphasis on grammar and vocabulary, suggesting that they instead should stress teaching appropriate expressions for different situations.

The draft underscores the need for students to learn all English skills — listening, reading, writing and speaking, including conversation and presentation — in a balanced manner.

To achieve this goal, the guidelines will set goals for each skill through elementary, junior high and high school, in line with the Common European Framework of Reference for Languages, or CEFR.

Using the goals set down by the guidelines, schools will establish detailed achievement targets for students.

The draft also suggests that fifth and sixth graders should learn English as a regular subject, with additional reading and writing in current activity-oriented programs for listening and speaking, with the aim of helping children become more accustomed to English.

At the third- and fourth-grade levels, when the students are still quite young, lessons should focus on introducing English.

The draft requests that the changes should not simply bring forward to elementary school students what junior high school students now learn, but new classes should be created to help students nurture a basic command of English by letting them get used to reading and writing in line with their levels.

To keep students from growing to dislike English, it is important to encourage them to keep a good attitude in trying to use the language, the draft says.

But an elementary school teacher in Shizuoka Prefecture asked, “How many teachers are there who can teach English in a balanced manner, including grammar and pronunciation?”

The ministry plans to proceed with boosting the English education system by using core teachers who are proficient in the language and by improving training courses, but teachers are concerned if this will work well if the proposed curriculum guidelines go into full effect.

The proposals come from an education ministry panel.

It also urges that a new subject called Public be introduced in high schools to deal with topics such as political participation and labor issues. This is in response to the recent lowering of the voting age to 18.

Another new compulsory high school subject, History in General, would concentrate on modern Japanese and world history.

On the back of progress in information technology, the panel proposed introducing programming education from elementary through high school. Pupils in elementary school would learn logical thinking in relation with programming, while junior high and high school students would learn programming technology.

In elementary schools, “active learning,” a method of education in which students themselves take the initiative in coursework, would be introduced in all courses.

The new curriculum guidelines are expected to be implemented for elementary schools in the 2020 academic year, junior high schools in the 2021 academic year and high schools in the 2022 academic year or later.

The panel is planning to conclude discussions by the end of August and submit its proposed guidelines to the government later this year.

School curriculum guidelines are reviewed about every 10 years because teaching priorities are viewed as changing in line with society.

The current curriculum guidelines were created to break away from the government’s relaxed education policy, which was criticized as having spurred a decline in students’ academic skills.

<http://www.japantimes.co.jp/news/2016/08/01/national/education-ministry-wants-emphasis-english-conversation-skills/#.V6lGlv195D8>