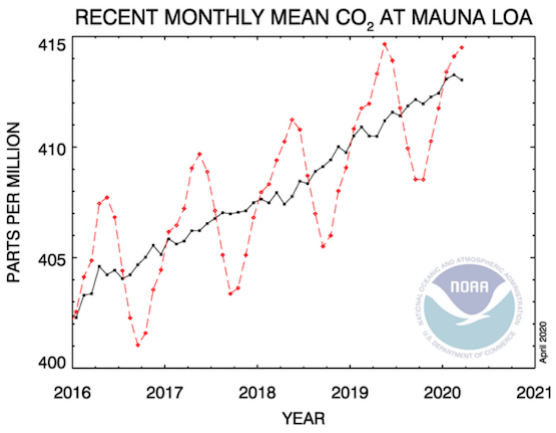
Subject: Re: Letters from Asia 2020 -- Numbers
From: "Meyer-Knapp, Helena" <Helena.Meyer_Knapp@evergreen.edu>
Date: 4/14/20, 8:23 AM
To: "Meyer-Knapp, Helena" <Helena.Meyer_Knapp@evergreen.edu>
CC: Helena Meyer-Knapp <knappmeyerknapp@gmail.com>

Dear All

I don't have anything in common with Donald Trump, I say and I genuinely believe it. But I am not being quite honest. One place where we share a little is that, all too often, I find "models" of the future maddening. The range of possibilities is impossibly large. Authors publish corrections, often quite large scale corrections and, as we know from recent events, models drive action. Don't get me wrong. I am not sorry that Imperial College and the University of Washington put out numbers that had a powerful effect on Trump, Johnson and their government officials. NONETHELESS . . .

DESCRIPTIVE STATISTICS I won't go on about the critique. Instead I will turn to descriptive statistics and the many ways those kinds of numbers have been helping me, in the past for sure but even more right now.

First the past. I was never a climate change denier. How could one be. BUT many years ago I looked through museum glass at the climate data from Paris dating back over 200 years. The variations were stunning. So I did find it hard to react with true understanding when climate models offered extrapolations based on a decade or two of data. Karen Hogan, an Evergreen colleague, broke through my carping with a simple chart. The steady climbing curve documenting increasing atmospheric CO2 at the summit of Mauna Loa on the Big Island of Hawaii. Oh it helped that I had lived on the island and knew for sure that this atmospheric data was uncontaminated by local sources. Most persuasive though was the simple line of descriptive numbers. No predictions. No models. Just frequency counts year after year with seasonal variations tied to increases in northern hemisphere heating in the winter months. This is up to date and my naked eye sees a possible "flattening of the curve" in the last two months — thanks to lowered economic action thanks to COVID 19? I am not naive, this may be a blip more than a flattening



.

If you want to see more. https://www.esrl.noaa.gov/gmd/ccgg/trends/.

Asia-Pacific Corona data

Last time I wrote I said I was focusing on deaths more than cases or testing. That's still the case. And I will be drawing on data from all round the Pacific Ocean not just the Asian edge. This data largely comes from worldometers https://www.worldometers.info/coronavirus/ and from a Japanese source with English text https://toyokeizai.net/sp/visual/tko/covid19/en.html

Let me begin by saying that the data from Europe looks so radically different from the Asia/Pacific data that it is hard to believe we are looking at the same illness. Or at least the data from most of Europe.

Country, Other	Total Cases	New Cases	Total Deaths	New Deaths	Total Recovered	Active Cases	Serious, Critical	Tot Cases/ 1M pop	Deaths/ 1M pop
Spain	172,541	+2,442	18,056	+300	67,504	86,981	7,371	3,690	386
Italy	159,516		20,465		35,435	103,616	3,260	2,638	338
France	136,779		14,967		27,718	94,094	6,821	2,095	229
Germany	130,383	+311	3,215	+21	68,200	58,968	4,288	1,556	38
UK	88,621		11,329		N/A	76,948	1,559	1,305	167

versus South Korea

S. Korea	10,564	+27	222	+5	7,534	2,808	55	206	4

and Japan

Japan	7,645	+27	143		799	6,703	135	60	1

First issue: the proportion of cases to 1million people — Japan and South Korea are vastly lower.
Second issue: With the exception of Germany, Europeans are dying at an event more vastly higher rate per million people.

The USA is much like Europe in the number of cases per million but its death rate is closer to Germany than to Spain or Italy.

USA	587,173	+232	23,644	+4	36,948	526,581	12,772	1,774	71

Descriptive statistics are great for opening up questions but they aren't great for answering them. It can often be worthwhile to put two kinds of description side by side. See below.

What do South Korea and Japan have in common?
Perhaps huge numbers of hospital beds in proportion to population

Hospital beds by country ()

Rank	Country/territory	Continent	Hospital beds per 1000 people					Change from previous year, average		Occupancy (%)[16]	ICU-CCB beds /100,000 inhabitants
			2013	2014	2015	2016	2017	Actual	Proportional (%)		
1	Japan	Asia	13.3	13.21	13.17	13.11	13.05	−0.06	−0.48	75.5	7.3[17]
2	South Korea	Asia	10.92	11.59	11.61	11.98	12.27	0.34	2.85		10.6[17]

Also, if you look up above you can see that Japan and South Korea still have far fewer cases per million than Europe or the USA. That relates, of course, to the social factors I wrote about the last couple of times. The small number of cases and the large number of beds are additive in their effect, perhaps.

What do Germany and the USA have in common?
Perhaps huge numbers of ICU beds in proportion to population

32	United States	North America	2.89	2.83	2.80	2.77		−0.04	−1.42	64.0	34.7[40]
4	Germany	Europe	8.28	8.23	8.13	8.06	8.00	−0.07	−0.86	79.8	29.2[22]

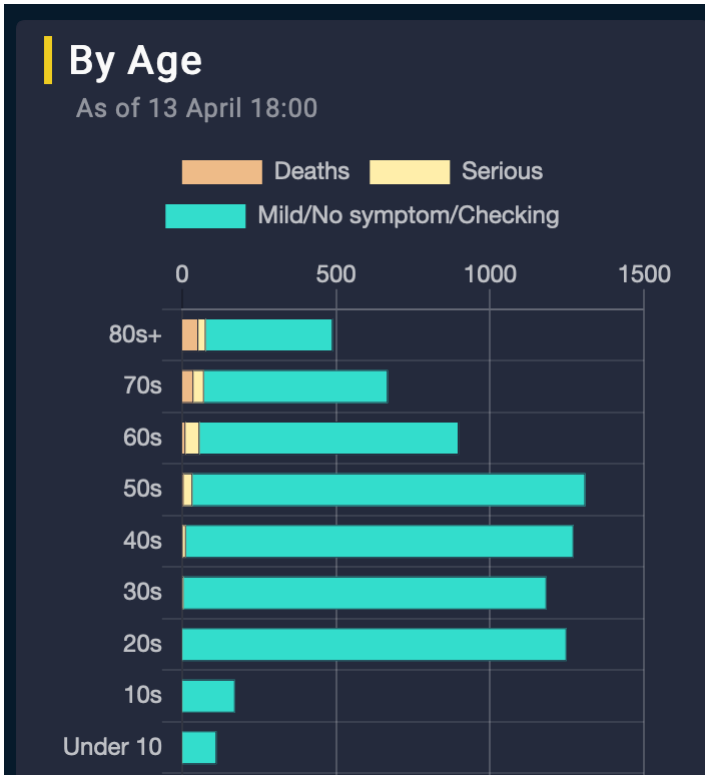
The worldometers website surprised me with its reminder that while Spain and Italy are in a global sense outliers, their European compatriots in the Netherlands and Switzerland, Belgium and Sweden are not astonishingly different. Europe as a whole is and outlier with the United States joining the Germany, saved not by a lower total case load per million but perhaps by their powerful medicine at the extremes.

Finland is the real European outlier. With only 12 deaths per 1million it is positively Asian in its numbers, though not of course in its geography.

ANECDOTAL DATA — VIRUSES AND THE SEASONS OF LIFE

Children
Viruses don't have a sense of purpose, the capacity for agency and yet they survive from generation to generation, from year to year. My first encounter with the idea that diseases needed humans to survive was in reading William McNeil's *Plagues and Peoples.* Lots of books, about the 1918 flu among others have taken up the issue in recent years. Children are central to McNeil's analysis. Survival for a virus entails not destroying its hosts or future hosts, so chicken pox is not lethal to kids and most of the time it emerges in kids. It's much more dangerous for the few adults who get it. etc. So the fact that this virus does not seem directly to damage children in large numbers is really interesting. Millions of them have been exposed. Few have died.

Another piece of descriptive data which prompts a question: What can we learn from testing immunity in children?
Japan's data is clear that young people show symptoms at much much higher rates than children. They are also being tested at much higher rates so all this can only be anecdotal.



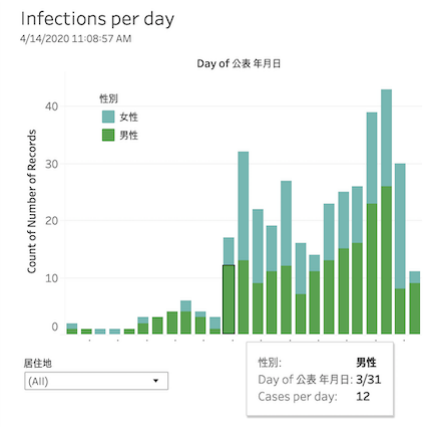
Summer weather

Trump wants us to believe that in April in the warm weather, this virus will evaporate. Do we have any data about this already? Well yes, a little. No firm numbers here but two interesting pictures.

First — that Australia and New Zealand both met the virus in the summer. They have two quite different political cultures. Australia's leader Scott Morrison appeared to be closely aligned with Trump and Johnson, certainly when it came to delaying action. Once he acted he seems to have been more effective. Jacinta Arden in New Zealand is at the other extreme — concerned, proactive and socially aware. Judging by national culture and leadership culture these two should be vastly different. But they are not.

Country, Other	Total Cases	New Cases	Total Deaths	New Deaths	Total Recovered	Active Cases	Serious, Critical	Tot Cases/ 1M pop	Deaths/ 1M pop
New Zealand	1,366	+17	9	+4	628	729	4	283	2
Australia	6,400	+41	61		3,598	2,741	80	251	2

Again a statistic which begs an important question in particular when compared with where Japan's earliest cases came about:
Hokkaido —frigid and northern with a resurgence in April
Kyushu, warm and tropical. Land of Satsumas and other warm citrus did not really start showing cases till end of March more than a month after the Hokkaido first emergency
Hokkaido a Hotbed. Japan Today headline Feb 24.
Hokkaido a hotbed again — Japan Today April 13.



So I shall be watching the southern areas of the Pacific, particularly New Zealand which has an actual winter with snow.

CHINA

China's data is now contested. Deaths per million the Worldometer chart it looks just like the rest of NE Asia. 2 per million to Korea's 4 and Japan's 1. It also looks like the South Pacific. Australia and New Zealand are both at 2 per million.

China	82,249	+89	3,341		77,738	1,170	116	57	2

So why is it contested?

Rumors and anecdotes — missing cell phones for example. But also images of lines and lines of people at funeral parlors waiting to pick up urns from crematoria that ran night and day. And a fearsome tracking system from which the government knows exactly who is where and which gives them a data monopoly. Then there are the analogies with the Great Leap Forward when cadres understated deaths by the million and overstated harvests, entirely covering the millions of deaths from famine.

I cannot see any pathway from here in the direction of a statistical basis for saying how and where Chinese people have sickened and died.

I can see that in Hong Kong, Singapore and Taiwan, communities which seemed to have the virus impact under control are dealing with new waves. As is China. By the way, China's refusal to allow Taiwan into the UN support system through the WHO has to rank as a soft diplomacy blunder, hardly likely to persuade many new Taiwanese that they might want to (re)unite with the mainland.

As I contemplate China in these times I incline to anecdote again, to a story about Weibo and the close to one million people who are leaving mournful and grateful comments on Dr. Li's account. He is the one who first alerted the wider world to the problem. He died and the government having declared him a hero is unable to shut down this "wailing wall" as the NY Times called it. https://www.nytimes.com/interactive/2020/04/13/technology/coronavirus-doctor-whistleblower-weibo.html?searchResultPosition=2

If your heart needs warming after all of these numbers take a look at the Chinese internet in personal and non-adversarial form.

So this is what I do when statistical models become numbing. I look for descriptions and anecdotes instead.

I hope that in this array you too find something enlivening or at least a prompt for a question of your own.

With warm wishes to all

Helena