

*East Asia Hotspots - Positive Feedback: South Korea, Technology, and COVID-19  
Responses  
Transcription*

Richard Haddock:

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Richard Haddock:

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Richard Haddock:

Welcome folks. Welcome back to the East Asia Hotspots Podcast. I'm Richard Haddock with the East Asia National Resource Center. And we have a great guest with us today. We are joined by Dr. June Park, a political economist, specializing in trade, energy, and tech conflicts in the United States, East Asia, Europe, and the Middle East. Her body of work predominantly focuses on why countries fight, how, and using what. She studies why countries have different policy outcomes by analyzing governance structures, domestic institutions, leaderships, and bureaucracies that shape the policy formation process.

Richard Haddock:

In addition to being an East Asian Voices Initiative fellow with the East Asia NRC, she's also a next generation researcher at the National Research Foundation of Korea for her first book manuscript, *Trade Wars & Currency Conflict: China, South Korea, and Japan's Responses to the US Pressures Since the Global Financial Crisis*. Dr. Park, welcome to the show.

Dr. June Park:

Hello.

Richard Haddock:

So, we'll start off right here with a first set of questions. And this is really getting down to COVID-19 responses in South Korea, as well as more broadly, and the uses of tech, AI, and

digital governance. So the first question is about technology and governance. How has South Korea used technology and digital tools in its management of the COVID-19 pandemic, such as tracking applications as well as the government's Smart Management System, and how important is the use of technology in the government's response?

Dr. June Park:

So in the South Korean case, when Patient Zero was surfaced in Incheon on January 20th, 2020, even before the pandemic hit South Korea, there were several years of preparation for smart city development within the country. This was in order to facilitate other technologies such as electric cars headed for automated driving, self-driving cars. Also, in addition to that, there were tracking methodologies in terms of artificial intelligence implementation in several different areas. Also in online retail, there have been ever since the Middle East respiratory syndrome in 2015, the retailers were very much into developing online apps with regard to tracking supply and demand of the consumers and the products.

Dr. June Park:

So, all in all, digital life in Korean society, South Korean society, has been very, very commonplace for the past decade. And when COVID came to South Korea, what happened was there were ministerial meetings across different kinds of functions within the government, and the KDCA, which was formerly KCDC, had meetings with other experts across different government bureaus. And the Ministry of Land, Infrastructure and Transportation, MOLIT, I will call them MOLIT from this point forward. MOLIT had already set in place different kinds of smart city applications or algorithms that were structured throughout the past years under government projects. And one of the MOLIT officials suggested at the meeting a week past the first Patient Zero, and it was suggested that South Korean GPS data could be collected through cell phones because there is a high percentage of cell phone possession, right?

Dr. June Park:

Additionally, credit card transaction information, which could track the movements of the person if the person does not remember where he or she has been. Additionally, CCTV data... CCTV allocation is quite commonplace throughout the country in order to protect the citizens from crimes and to investigate crimes. So when the MOLIT officials suggested that we could actually use the smart city applications and utilize the data, if based on consensus, could be deployed through companies, private companies, or through the Ministry of Economy and Finance that has the economic data of different kinds of companies.

Dr. June Park:

Of course it would have to go through a blockchain sort of anonymous kind of authorization and the data needed to be deleted after only 14 days. Those were the minimum time period required to process the tracking. And when that authorization would be given then, the KCDC, which is now KDCA, would be able to track the patients. But regardless of all of these efforts, none of these efforts could have come into being had it not been for the fast-track law under the Infectious Diseases Control and Prevention Act, IDCPA.

Dr. June Park:

So the IDCPA was already in place decades ago, but through MERS, the Middle East respiratory syndrome, it was revised in order to facilitate the collection of hospital data and patient data by the Minister of Health and Welfare in times of infectious diseases. So the data collection is basically upon conditional circumstances, conditional use upon peculiar circumstances. And what happened in the February and March periods for the transition and the laws to be revised under a fast-track method at the National Assembly was that under the presidential decree, that this would actually be facilitated in a very, very rapid manner.

Dr. June Park:

And once it would be passed, then under those legal grounds, the KDCA and MOLIT would be able to work in concert to collect the data and to trace the movements of people in a cluster infection. And what the KDCA would do is collect the data, get an idea of a ballpark who would have been in the possibility of getting infected, and they would inform the individual and if tested positive, they would be under quarantine or they would go under treatment if their symptoms are harsh. So that's basically the mechanism.

Dr. June Park:

The questions that arise from data collection, it has been quite controversial even here. And CCTV data, not so much because people are used to it, but the collection of GPS data, of course, has been under scrutiny by the public, but people have been more or less agreeing to the collection of private data. This was evidenced by after the August 15 go home Moon demonstrations, restaurants and cafes, dessert places, and different kinds of bakeries, be it larger scale franchises or a smaller scale, you would walk in and you would have to provide your data. Also in public spaces.

Dr. June Park:

There are two ways to do this through the Naver app, which has a QR check-in mode. Also using the Kakao app, a Korean messenger app. QR codes are collected or people can write down their information. So names are not required, but phone numbers are. It's like an identity

on you in South Korea. So when the social distancing measures were a little bit lowered after mid-October, people would continue to provide this kind of data. So what that shows is that there is a willingness by the public to be informed if they get in the midst of some cluster infection. If they were on that spot and they would want to be informed by the officials, then you would gladly just provide your information and you would get informed later on regarding the infections.

Richard Haddock:

I see. That definitely seems like the technological structures in place facilitated the implementation of some of these procedures you're describing. About medical technology, in a recent article that you and co-author, Eunbin Chung, have been working on, which is Learning from Past Pandemic Governance: Early Response and Public-Private Partnerships in Testing of COVID-19 in South Korea, you describe the role of public-private partnerships and medical industries leapfrogging in order to develop and implement some medical technology regarding things such as developing test kits. What is leapfrogging and how has leapfrogging related to the development of medical technology for use during the COVID pandemic?

Dr. June Park:

So leapfrogging essentially is a term in the field of development economics and international development with regard to innovation. New ideas that spring up, be it from a small scale company or a large scale company, new, innovative ideas to take the field forward in a certain industry. And the literature on leapfrogging is very, very diverse. It can be from an industrial organization perspective or a company management perspective, but the literature that we built on was mainly on small and medium-sized enterprises trying to develop their skills within relatively a short period of time of maybe about two decades, and then trying to seize opportunity when a crisis hits, when a crisis such as public health crisis or a pandemic such as COVID hit.

Dr. June Park:

So one of the things that we point out in the article is that even before the outbreak in South Korea, once these companies, the Korean RT-PCR companies knew about the outbreak in Wuhan in 2019, late 2019, they were developing the polymerase chain reaction kits in order to prepare because 2002, South Korea also experienced the SARS, which is also a coronavirus infectious disease. And although at that time there weren't any casualties from the pandemic, South Korea would be subject to any kind of interaction with Chinese tourists coming in, Chinese business flyers coming into South Korea and then flying back with South Koreans also.

In a people to people to exchange, common and frequent interactions across the border with China, it was almost determined at that point that it would come to South Korea.

Dr. June Park:

So I think the companies, they were striving very hard to develop the test kits in time. And by the time it hit Korea in January, the companies were ready with their products. So the public-private partnership scheme was in concerted effort with the Korean CDC, so Center for Disease Control, and the Ministry of Food and Drug Safety, but what they would do is set up a mechanism under which the companies that wanted to have their RT-PCR test kits for COVID testing be approved through a verification process that is proctored by the Ministry of Food and Drug Safety.

Dr. June Park:

Once their products passed, their data and products passed the MFDS, the KCDC, formerly KDCA, would give a green light for their items to be sold as products that are given Emergency Use Authorization. So once the Emergency Use Authorization is achieved by the companies for their specific test kits, then they can have them sold throughout private university hospitals, or public university hospitals, or medical clinics, or just screening test sites or drive-through test sites and they will be paid by that sale, or they could export their items as well. But EUA and export licenses have been separate. EUA for use within the South Korean territory is only if you pass the EUA verification process. If you don't pass, you could still apply for the verification processes at the European CDC or the US FDA. And when you are granted authorization in those places, you are free to export your items. So this works in a separated process in terms of exports and authorization for use in South Korea.

Richard Haddock:

So discussion about, you mentioned before about private data collection and digital governance with regards to managing the pandemic, and then also public and private partnerships in this endeavor. I wonder, what are some of the... That you can tell are socio-cultural norms or beliefs, including perspectives on the ethical uses of digital and medical technology? How do these norms or beliefs play a part in differences between global responses to the pandemic? Perhaps take South Korea, and if there's another case in the United States, for example, that we could start to see differences and what could be implemented or what could work in different countries.

Dr. June Park:

Right. On this, my current ongoing comparative project on the COVID tracking apps or COVID tracking mechanisms between South Korea and Europe and the US could probably shed upon some important points in terms of differences. In South Korea, the IDCPA that I mentioned, the Infectious Disease Control and Prevention Act, enables the collection of these private data and hospital data regarding infectious clusters, regarding individuals, but such kind of mechanism cannot be plausible under the European General Data Protection Regulation, which is called GDPR. GDPR is very, very stringent across the European Union. And it also transcends the European region if foreign companies are interacting with European entities and they use proprietary data of European citizens. And the violation fine for violating GDPR is quite a sum. And it would be a little bit self-destruction area of a company to actually misuse European citizens data.

Dr. June Park:

So this tells you the national law mechanisms that are set in place in Europe and in South Korea, they spring from different political systems, but at the same time, the values, the ethical thinking behind the use of personal data, the philosophy of it is also very different. And in the South Korean case, I think the law was, although South Korea has the Personal Information Protection Act, PIPA, the Infectious Disease Control and Prevention Act, the IDCPA, would be upon a conditional circumstantial kind of a use, whereas the GDPR certainly did not allow for GPS data collection.

Dr. June Park:

At the same time, because the infection toll in Europe was so widespread and shooting high, what happened was in the phase of the coronavirus pandemic, the European Union set to discussions about inserting certain clauses within the GDPR so that there could be certain collection of data, but not GPS data. GPS data was considered part of a human and it would not be subject to collection under any circumstances in Europe. So what happens to be the case in Germany or France or the UK, is that they were able to get Google and Apple work on an API to actually facilitate a mechanism on people's cell phones in order to be able to detect through Bluetooth technology, whether you are passing by, whether you come in a range of detection with a person who has been infected with COVID.

Dr. June Park:

I think the idea behind this API is great, but when it comes to the efficiency of it, because the speed of infection is just so rapid and fast beyond what the API mechanisms can do on cell phones through Bluetooth technology, I think that the kind of mechanism that is to be set in place in terms of electronic tracing requires far more than the API used by European countries.

And so, for example, the discussion on electronic tracing came about in Germany in the earlier phase of the crisis when there was manual detection, manual tracking efforts conducted by the German public health authorities. And one of the very renowned German epidemiological researchers, Christian Drosten, on Der Spiegel, he hinted that electronic tracing would become inevitable in months, especially into fall and in the winter when there would be the influenza, common influenza in the fall and winter seasons in addition to COVID.

Dr. June Park:

So I think the discussion in Germany has been a little bit more driven in terms of allowing for more efforts in terms of data collection, but at the same time, in countries like France, this is still a little bit draconian to accept and in the UK also, but the EU is separating from the UK. So I'm not quite sure how the UK is responding with regard to GDPR implementation. All of the countries that have implemented API from Google and Apple, even countries like Italy, for example, they are very much aware of what GPS collection, GPS data collection of its peoples, can mean in an ethical in a philosophical way with regard to handling governance. So I wouldn't think that the South Korean system would be easy to emulate in these countries.

Dr. June Park:

The US has also... Microsoft has also announced a plan to deploy a similar API and to store through Microsoft, the kinds of tracking data and to process it through Microsoft systems. I am not sure how the US has been implementing this. The news came out roughly around August or September, I recall, regarding an API system. But the question is also about citizenship and citizen or public participation rate when it comes to being willing to be tracked or being willing to give data in an effort to eradicate this disease. And in South Korea, I think the public participation rate has been high because people wanted this to be over as soon as possible, but in places like Europe or the US, chances are people's priority may not be in trying to get this done or trying to overcome the public health crisis itself. There are other issues at large, and it may be hindering the kind of effort that is required justify COVID.

Dr. June Park:

So the medical data use or the digital means of medical technology may not resonate throughout the world because countries have different national laws set in place and it would be very, very disturbing for some people to accept this kind of legal mechanism in some parts of the world. And on this, I think going into the era of artificial intelligence, some countries not having a full fledged AI mechanism for a driving agenda based on very articulated proprietary data governance tools, they may run into these issues with their citizens continuously because many countries at the moment are especially, if utilizing technology, AI technology in terms of

COVID, they are ignoring these kinds of issues. Especially in China, AI development is spirited by China at the moment, and personal data collection is not under any specific law in China with regard to COVID data. People's data are subject to controlling the pandemic itself, not just on conditional basis, but just as a whole.

Dr. June Park:

In the South Korean case, after two weeks, the data is deleted, but people are still a little bit concerned about how their data would be utilized within those two weeks. So in the news, you would see people very concerned about how their data gets around, not just in the Smart Management System, but word of mouth is the scarier aspect when your name gets on the news, because names are not supposed to be published by any government agencies and only through word of mouth would your name be revealed because through rumors or human facilitated conversations, the personal information to that extent would be revealed.

Dr. June Park:

So differentiating those things in the Korean discussion on personal data collection has been really crucial, I think, but has not received that much significance by the media. The word of mouth traveling really fast, it's beyond the capabilities of the commissions, the board, and the commission for broadcasting that would oversee the kinds of these movements, they are not appropriate, they are not acceptable socially, but it happens. And they sometimes have made headlines in South Korea.

Richard Haddock:

I see. And I think there is in the South Korea context and in several other countries that have made significant progress in managing the pandemic, there's been institutional learning and societal learning involved. You mentioned MERS, the middle East respiratory syndrome, as well as the SARS, severe acute respiratory syndrome outbreaks in South Korea. And in the article we mentioned before, you and Eunbin Chung discuss feedback theory in analyzing the current South Korean government's response to COVID versus how it's handled outbreaks in the past. So what is feedback theory in a nutshell, and how do you think that it could be played out in other countries and their crisis responses? More to the point, what are some of the crucial lessons you think that democracies in particular could take away from the feedback that South Korea has gained?

Dr. June Park:

Feedback theory is essentially a mechanism under which one policy action in time one, have shortcomings or some backlash for any kind of negative outcome that is not fulfilling the



deliverance of governance. And at time two, a future point within the feedback theory explanation, time two would be the time when those kinds of shortcomings would be addressed because previously, there were records of negative outcomes using a certain policy action. And time two would be a chance, an opportunity of improvement or upgrading of policy actions taken in time one.

Dr. June Park:

So in the case of South Korea, MERS in 2015, could serve well as time one when there was not a large scale Emergency Use Authorization of test kits. In 2015, EUA was in place, but not in terms of a large scale mass production facilitated by different screening centers all across the country. Only the KCDC was able to test and to process the tests. And so patients that were given information that they were infected and did the test, it would take up to 21 hours to get the test results done by the KCDC at that time period. And people would go from hospital to hospital just trying to figure out whether they are recovered, what kind of treatments they have to receive, because there was the lack of streamlined process in terms of treatment and testing.

Dr. June Park:

So having learned from that crisis, time two, when COVID happens, the first thing that the public officials, public health officials do is to gather people in the in vitro diagnostics, the RT-PCR test kit developers, and they ask their opinion. What do you think we should do in terms of trying to get this virus under control and to have people test on a wider scale? Then the answer comes from the industries via a concerted effort. Yes, through the EUA verification system, large scale testing would be enabled if and when certain companies are given EUA and we mass produced it. Mass produce the verified test kits.

Dr. June Park:

So in time two, only because there was large scale testing that was convened at a very, very early phase, South Korea was able to flatten the curve in ways that other countries did not. Had it spread over beyond this level, South Korea would have also faced the questions regarding having to deploy antibody testing, serological testing, with lower levels of accuracy when RT-PCR test kits have a higher level of accuracy at roughly around 95%. So I think that the feedback theory serves a great role in this regard, in explaining South Korea's revised/improved, upgraded manner of pandemic governance.

Richard Haddock:

Looking into the future, if you will, I know that you've discussed several interesting and major digital governance and technological use trends that you're looking at now and into the future.

But if you could narrow down, if you had to pick the most crucial digital governance trend going into the future and how the COVID pandemic is shaping that trend, what would you pick and what would be the major players involved in that trend, whether it's specific countries, companies, or multilateral organizations or groupings such as the Global Partnership on Artificial Intelligence or other such things?

Dr. June Park:

So COVID has unleashed the kinds of social conflicts that may arise in the digital realm. And these have been long a way to discussions on how countries would implement data protection, data governance, data collection, and processing. In addition to that, how would countries defend themselves against hacking such as DDoS attacks or ransomware attacks, especially because under this kind of digital-oriented life that COVID has led us to lead, what kind of defense mechanisms would there be? Be it just, not just economically, but also militarily, because when systems are compromised, then the recovery requires your own self-defense mechanism.

Dr. June Park:

And in terms of having different countries on the same page on data governance and artificial intelligence, it might be very, very difficult, especially at a time point when different countries across the world are having varied results regarding COVID, regarding pandemic governance. But at the same time, there is the common denominator, which is digitalization and contactless transactions in the digital realm. And this would be the baseline scenario for many, many countries that are not just in the developed world, but also in the developing world where other steps toward development could be skipped and countries can hop right into the digital realm.

Dr. June Park:

Another source of tension may arise with the adoption of 5G network infrastructure, which would enable and facilitate different kinds of expedition of data processing when it comes to autonomous driving, when it comes to 8K streaming. These kinds of technologies may not be the essential items required for combating COVID, but they're intended for the next generation of industries. And in doing so, countries need to develop a national legal mechanism in order to facilitate that process, and that mechanism may vary significantly among countries.

Dr. June Park:

So the GPAI at the OECD is a combination of maybe 11 countries, but excluding China, which also signals a little bit of a missing participation in that regard. Countries that are like-minded countries that sit down to discuss how artificial intelligence could be achieved through a

governance agenda, a common governance agenda. The common denominators may be very minimal, even if there is a governance tool set in place by these 11 countries and they add on new members for better implementation and more streamlined global implementation. There may be varying nitty-gritty details on which countries adopt which technology and which countries do not.

Dr. June Park:

So the GPAI is an institutional tool that allows for discussion, but legalization of certain things, it would require a lot more effort in discussions and detailed maneuvering by countries themselves in deploying these kinds of technologies. They need to be able to figure out what kind of national laws need to be revised or need to be newly written in order to meet the challenges into the future of the industries. So GPAI sits as one of the venues for discussion, but it may not be able to guide us into where things are headed. The countries are responsible for doing that first, and then the GPAI would be able to serve as a better venue for discussing these issues.

Richard Haddock:

So if someone like myself wanted to learn more about these future trends of technology and governance, or the advancement of medical technology for public health response, what resources would you recommend, or what resources do you consult?

Dr. June Park:

So at this point, I want to be frank, not many institutions have indulged in like a cross-country kind of comparative mechanism in terms of research. Our Digital Trade and Data Governance Hub at GW has done preliminary mapping of those policies across 40 countries, and the mapping is to be developed more further complemented with data governance issues. Right now, what's available throughout the internet are government strategies in their own internet infrastructure or digital infrastructure policies led by their science and technological gurus, ministries, on these agendas. So every country has a different window, a channeling person, the person in contact for ministry that is to take care of the agenda. And the way it works across different kinds of countries, you just need to go into their science and technology websites to figure out what they are intending to do. But in many cases, there won't be enough details to make a full comparison of countries that you were interested in.

Dr. June Park:

So that's what we're trying to achieve at the Digital Trade and Data Governance Hub as countries try to formulate these kinds of mechanisms. And as they develop those mechanisms,

connecting the dots between country goals, country projects, and the industries that they will push for based on the kind of data governance that they are willing to develop or are developing, those are the things that have to be conducted in terms of research content development. And once we have that, then venues such as GPAI could be more fruitful because then you would have an array of policies that are implemented across the globe and you could really just put a finger on which areas need more considered effort, which areas need more upgrading depending on the country situation.

Dr. June Park:

And I'm thinking into the future, it would be very difficult to dictate what countries should do in terms of artificial intelligence. Every country would have a different mechanism toward achieving this. And because of that, there may be conflicts arising in the digital realm, and the GPAI should also serve as a discussion platform when conflicts arise and the conflicts need to be talked out.

Richard Haddock:

Yeah, I see. Well, thank you so much for a fruitful discussion, Dr. Park. For those of you who want to keep up to date on her reach, please visit her website at [blogs.bu.edu/junepark/](https://blogs.bu.edu/junepark/) for all the latest information on everything Dr. Park is doing. Thanks again for joining us.

Richard Haddock:

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Richard Haddock:

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