Comparative Culture Study–High-Speed Railway Systems in Japan and South Korea

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One-Day Trip between Osaka and Seoul

I often use the Korea-Japan Through Ticket to travel between my current residence in Seoul, South Korea, and my family home in Kyoto, Japan. This discount ticket covers travel between Shin-Osaka and Hakata by shinkansen in an unreserved seat, Hakata and Busan by high-speed ferry, and Busan and Seoul by Korea Train Express (KTX) in a reserved seat. At ¥24,650 for a one-way trip (180,000 won if purchased in Korea), it is not cheap. However, it is not significantly more than a discount air ticket if the cost of getting to and from the airport and airport taxes are taken into account. If I leave Shin-Osaka on the *Nozomi* shinkansen at 07:08, I arrive in Hakata at 09:42, in time to take the *Beetle* jetfoil, which leaves Hakata Port at 11:10 and arrives in Busan Port at 14:05. After completing immigration formalities, I can take the 15:00 KTX from Busan, which arrives in Seoul at 17:50. Although the journey between Osaka and Seoul takes longer than by air, it is much quicker than the trip of about the same distance (approximately 1200 km) between Bangkok and Kuala Lumpur, which takes 3 days and 2 nights, thanks to the high-speed railway and ferry services in operation. The trip by train and ferry is very convenient if I have business to take care of on the way, either in Fukuoka or Busan. Rather than looking down on cityscapes from the air, it is refreshing to see sights such as Iki, Tsushima and Oryukdo from the high-speed ferry.

Various differences in onboard facilities between the shinkansen and the KTX high-speed railway systems can be spotted easily when travelling on both in the same day. For example, the shinkansen has men's restrooms not found on the KTX, whereas the KTX has dedicated luggage space, while the shinkansen does not. Passengers sitting down for most of the journey are not especially concerned about the difference in amenities; it is more the inconvenient aspects of each system that stand out. For example, I can get my preferred unreserved seat (e.g. a window seat in a non-smoking car) at Shin-Osaka Station in the morning for the journey to Hakata simply by lining up. However, in the evening at Busan Station, reserved window seats facing the direction of travel will be fully booked for all trains leaving for Seoul in the next 2 hours, meaning that I will need to wait for my preference. Seeing the same such occurrences on each successive journey, I imagine what it would be like if the Japanese and Korean methods of ticket sales and passenger handling at peak times were reversed. However, I quickly realize that reversing the methods would instantly cause disorder. The best is being done in both countries based on the ideas and methods of each society.

In discussions about high-speed rail systems, many authors focus exclusively on technologies. However, high-speed railways represent social overhead capital for the people of a country and products for railway users. I thought it would be meaningful to look at high-speed railways in terms of both technology and society, by investigating how high-speed railways are accepted in various cultures and societies and the types of plans and systems in each. In this article, I would like to compare high-speed railways in Japan and South Korea, which face each other across the Sea of Japan, from one user's perspective.

Ticket Marketing Strategies

There are inexpensive tickets that offer unlimited travel on the respective country's railway system aimed at foreign tourists in both South Korea and Japan—the JR Pass in Japan and the KR Pass in Korea. However, these tickets are not available for the main users of the two rail systems—the residents of the two countries. Since it is difficult to sell the large number of seats on each service (1323 on the shinkansen, 935 on the KTX) at regular prices, it is important to evaluate the various discount strategies to sell all tickets with optimum efficiency based on demand in each country.

The pricing system for shinkansen fares and surcharges is largely rigid. Only two fare discounts are offered—20% for students and 10% for round trips where the one-way operating distance is 601 km or more. The only difference in the price of the shinkansen surcharge is an

increase of only ¥200 during the peak season and a ¥200 discount during the off-peak season. This is because on routes, such as Tokyo to Osaka/Nagoya, where demand is high, use is still high with low price elasticity of supply. However, there is a risk of seats on other routes not being sold. Therefore, special tickets are offered on routes where demand is low to maximize the efficiency of sales. Strategies include offering inexpensive tickets for leisure customers (such as the GALA Day Trip Ticket, a round-trip ticket for skiers that can be bought on the day of travel) and selling tickets to encourage business customers to use the railway in preference to other transportation modes (one such ticket is the Sanyo Shinkansen Double Ticket—two one-way tickets sold as a set). The ministry has worked in conjunction with the Japan Travel Bureau since before WWII to popularize such tickets. After the JNR privatization, each of the companies in the Japan Railway (JR) group acquired know-how from these sources and developed similar products to meet their own circumstances. Moreover, it was difficult to establish a uniform discount scheme throughout Japan because there were 20,000 km of railway lines and the ability to shoulder part of the burden differed substantially depending on the locality and line.

On the other hand, KTX tickets are cheaper if bought in advance (20% discount for purchase 2 months to 30 days before travel, 15% for 15 to 29 days before and 7% for 7 to 14 days before). The discount is halved for travel on Saturdays, Sundays, and national holidays, and there are three types of discount cards: business, student, and senior citizen, offering a maximum discount of 30%. Although there is flexibility in the fare system as a result of such discounts, very few special tickets are offered. There are two reasons: first, since Korean travellers do not generally refer to timetables or magazines to collect information before taking a trip, planning in this way could actually be viewed as troublesome; second, marketing strategies were adopted from the French National Railway Company (SNCF) along with train à grande vitesse (TGV) high-speed technologies. The only special tickets offered are the Korea-Japan Through Ticket previously discussed and a KTX-Cruise-related Program (To or from Jeju Island).

Train transfer and monthly commuter pass discounts are offered in both countries. Korea used the system developed in France in conjunction with elements of the Japanese system. However, it must be remembered that the reason commuter passes are popular in Japan is because employers usually pay for their employees' passes by providing a commuter allowance. It does not follow that the same result will necessarily be achieved in Korea even with similar commuter pass systems in place, because Korean companies do not usually give a commuter allowance to employees. Nevertheless, in only 2 years since opening, the KTX has achieved ridership levels of 85.0% on the Gyeongbu Line and 57.1% on the Honam Line. Since the vast majority of travel is either to or from Seoul, excessive levels of overcrowding or empty seats have been avoided, partly thanks to the range of discounts offered.

Travel To and From Stations

Seoul and Busan stations have significant numbers of people seeing passengers off or waiting for passengers to arrive. It is reminiscent of an earlier Japan when similar scenes were common at terminals, such as Tokyo and Osaka. Although not entirely uncommon in Japan today, stations no longer look like airport terminals with a large number of passengers being seen off or met by friends or family members. The JR group of companies have well-developed services in the various cities. For example, tickets for distances of 201 km or more to or from a large city in Japan read 'within Tokyo' or 'within Osaka City.' Because these tickets are valid from the city shinkansen station to all stations within the city radius, passengers simply transfer to a regular line to reach their final destination after disembarking from the shinkansen. A shinkansen station was added to the Tokaido Shinkansen Line at Shinagawa because forecasts indicated that passengers would travel to the station from other locations, such as Shibuya, Shinjuku, and Ikebukuro. Only JR group companies, which operate both shinkansen intercity services as well as local services, could have conceived such an idea.

Shuttle train at Gwangmyeong KTX Station (Author)

In Korea, tickets are from 'Busan Station' to 'Seoul Station', for example, explaining why so many people arrange to meet at the ticket gate at Seoul Station. While Korea Railroad (Korail) does operate a wide-area railway in the Seoul metropolitan area, both fares and ticket gates are completely separate from intercity services. However,

attempts have been made to integrate the Korail wide-area railway system with the city subway system—something that has not been done in Japan yet. Although integration would bring substantial benefits for travel within Seoul, the merits would be less noticeable for travel to or from high-speed railway stations. In fact, Yongsan is the only station where it is possible to transfer between the KTX and the wide-area railway without leaving the station. At Seoul and Daejeon, it is necessary to leave the station to transfer because the Korail and subway stations are not integrated, although the transfer is covered for protection against bad weather. At the other stations—Dongdaegu, Busan and Gwangju—convenient transfer between the KTX and subway has not been taken into account at all. We cannot really blame the inconvenient layout on the operators—the main reason is the local governments' lack of understanding about transfers.

While travel to and from high-speed railway stations in Korea is convenient, a new—and rare—shuttle train service was implemented on 15 December 2006 to promote use of Gwangmyeong KTX Station. Direct services were inaugurated to Gwangmyeong KTX Station from Yongsan via stations in southwest Seoul, such as Yeongdeungpo, Sindorim and Gasan Digital Complex, using a high-speed and conventional approach line via Siheung. It appears that more passengers use this station for travel into the centre of Seoul as opposed to away from it, which is also the case with Tokaido Shinkansen Shinagawa Station.

Struggles in First Opening Phase

The first phase of the KTX was opened on 1 April 2004, following two amendments to the original plan. New high-speed lines linked Siheung to Daejeon Yard and Okcheon to Sindong, while existing conventional lines were used within Seoul, Daejeon and Daegu and for the section between Daegu and Busan, serving high-speed trains. This strategy suits Korail, which uses standard gauge for both high-speed and conventional lines. The first planning phase also included the Honam Line from Seoul to Jeolla-do. Electrification of the conventional line from Daejeon to Gwangju and Mokpo was completed before the start of KTX services and so direct high-speed services to these destinations began. This arrangement is impossible in Japan because the shinkansen runs on standard gauge, while conventional lines use narrow gauge. Although both the 'Akita Shinkansen' and 'Yamagata Shinkansen' run on conventional standard-gauge lines, building these lines was expensive and took a long time.

In particular, since French TGV technologies were incorporated into existing conventional Korean railway facilities, uncommon features in Europe can now be seen in the Seoul KTX terminals during the first phase. To facilitate smooth return transfers, there is a separate terminal for each direction—at Seoul Station for the Gyeongbu Line and at Yongsan Station for the Honam Line, which is similar to the method used in Europe. A through platform layout is used at both Seoul and Yongsan stations with the Gyeongbu Line tracks running directly into the Gyeongui Line. Out-of-service KTX trains are forwarded to the Goyang Depot (some to Haengsin) while conventional trains are forwarded to Susaek Depot. This system is different from the dead-end platforms in Europe. The former Seoul Station is designed by Yasushi Tsukamoto (1869–1937), and it resembles Tokyo Station designed by his senior Kingo Tatsuno (1854–1919). Both are central stations in the capital with through platforms. Because Tokyo Station was built based on German technology brought from Berlin to Japan by the German engineers Hermann Rumschöttel (1866–1914) and Franz Baltzer (1857–1927), and subsequently to Seoul, it would be very interesting if a new perspective on track layout for high-speed railways could be given back to Europe from Asia.

Direct services on standard-gauge high-speed lines and conventional lines are not always used to link sections. For example, although the first phase of Japan's Kyushu Shinkansen is already in operation between Kagoshima and Yatsushiro, services between Yatsushiro and Hakata operate on a conventional line with across-platform transfers made at the newly built Shin-Yatsushiro Station. The 257.5-km journey from Yongsan to Gimje on the KTX Honam Line (132.7 km of high-speed track) takes 1 hour 58 minutes on the fastest train, which stops at four stations. On the other hand, the 253.2-km journey between Kagoshima-Chuo and Kurume (137.6 km of high-speed track), using the *Tsubame* (shinkansen) and then transferring to the *Relay Tsubame* (conventional line), takes only 1 hour 46 minutes on the fastest train, which stops at three stations. From this situation, we can see that during the temporary phase leading up to the full-scale opening of the Kyushu Shinkansen, a similar degree of functionality was achieved with narrow gauge as by a gauge change, by using a distributed traction system, ensuring across-platform changes, using raised-floor platforms, and eliminating unnecessary approach lines. Problems during the first KTX Gyeongbu Line phase caused by slower speeds over conventional lines will be solved in 2010 with the opening of the high-speed section between Busan and Daegu. Similarly, the opening of the high-speed section between Hakata and Yatsushiro in 2011 will solve the Kyushu Shinkansen's slowness and transfer problems too. Nevertheless, I am hopeful that the new infrastructure and know-how will be put to optimum use to bring the benefits of high-speed railways to other areas. In particular, I believe direct KTX services should be operated to Pohang and Jinju using the high-speed to conventional line approach and limited expresses should be run from stations on the Kyushu Shinkansen to Nagasaki and Miyazaki.

Across-platform transfer between *Tsubame* and *Relay Tsubame* at Shin-Yatsushiro Station (Author)

Guilt, Shame and Commonsense

In *The Chrysanthemum and the Sword*, American anthropologist Ruth Benedict (1887–1948) wrote that American values are based on a 'guilt culture,' the focus of which is absolute standards of morality and relies on developing a conscience, whereas Japanese values are based on a 'shame culture,' the focus of which is external compulsion (shame as a reaction to other people's criticism), which necessitates self-respect and prudence. This concept has been criticized, and being Japanese, I am not sure I can accept her analysis objectively. Nevertheless, some of the ideas are useful for making a direct comparison. First, the characteristics of Japanese railways are:

- Unreserved seats account for a large proportion of train seats, which are used effectively by passengers.
- A variety of special tickets are offered and customers select the most appropriate for their needs.
- The route is left to the passenger, with travel to or from anywhere in a city covered, and this system is accepted by passengers.
- There is a distinction between shinkansen and conventional limited-express services with transfers made as necessary.

Some aspects of this system might be seen as the results of Benedict's shame concept. Rather than meet user needs in terms of absolute standards with incorporated flexibility, Japanese railway operators offer a range of alternatives and passengers study timetables to 'take one's proper station' from the alternatives.

In Korea too, it seems that the shame concept also describes the situation better than guilt. However, I believe that Korean values can be described as a 'commonsense culture,' based on unwritten codes that apply within each circle that individuals belong to, such as nationality, locality or family, and encapsulated by the *woori* tribal concept. In such a culture, services must be based on logic (code) that makes commonsense to both the operating company (provider) and user (consumer). However, concepts come first, because high-speed railways are new for both the operator and users in Korea. It is likely that this has led to implementation of various general but formal measures in infrastructure—such as the start of direct services using both high-speed trains and long-distance conventional lines, and high-capacity shuttle trains to Gwangmyeong Station—as well as in marketing—such as including a 5% discount for backwards-facing seats, and the flexible pricing system. Although I see some rigidity in these features, it is a fact that the Korean system functions well without disorder.

There are high expectations for high-speed railways in Asian and other nations, following the recent start of new high-speed railways in Taiwan and China. Countries already possessing such systems, such as Japan, France, Germany, Canada, Italy, and South Korea, are attempting to enter the market, providing assistance with funding, technology, and operational know-how.

This article focuses on the differences in how high-speed railway systems are accepted in Japan and Korea. Although there are many cultural similarities between the two nations, there are differences. For effective use of high-speed railways as social overhead capital in countries where independence is valued more than in Japan and Korea, planning and operational requirements are different from high-speed railways in existing models. Although Benedict wrote *The Chrysanthemum and the Sword* based on the wartime need to understand the Japanese character, it is not simply anthropological research. In increasingly important future international technical cooperation, both partner countries need to understand each other's culture and compare it objectively with their own.

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