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Bodies and Viruses: Biomedicalizing Hepatitis B in Shaping South Korea's Nationhood

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Abstract: Hepatitis B was a stigmatizing disease, because of its reputation as a problem of underdeveloped countries and marginalized people. Biomedicine, including vaccination and science-based sanitation, was regarded as the only effective measure for their improvement of health. Hence, some scholars have assumed that bodies and the disease were just the objects of biomedical intervention that was essential for nation-building. Challenging this assumption, I argue that Korean bodies and hepatitis were instrumental in forming biomedical and nationalistic discourses and exercises in South Korea during the 1970s and the 1980s. In a developmental state under military dictatorship situated within the changing Cold War politics, the disease and bodies, with their biological and cultural relations, contributed to shaping the biomedical investigations, enterprises, and practices that were interpreted and appropriated with nationalistic metaphors. Therefore, hepatitis B, alongside those who carried it, came to evoke the contradictory imageries that symbolized both the progression and backwardness of the country.

Keywords: hepatitis B, nation, South Korea, biomedicine, bodies

Introduction

As a longstanding disease in East Asia, hepatitis B suddenly became a focal point of intense national concern in South Korea during the late twentieth century. Although paleopathologists found hepatitis B virus (HBV) in a Korea mummy as early as the sixteenth century, it was only during the 1970s and the 1980s that hepatitis B attracted serious attention from most Koreans (Bar-Gar et al. 2012). The disease then called for urgent responses, which were technological, cultural, and political in nature. Most of all, the two decades saw the

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deepening anxiety on the disease that led to the development of several new vaccine products. In 1983, the Korean Green Cross Corporation (KGCC, Noksipcha), along with Kim Chung Yong (Kim Chŏngyong, 1935-2016) at Seoul National University Hospital (SNUH), launched Hepavax B, the first Korean vaccine against the disease. Simultaneously, the disease elicited a persistent movement to change everything that appeared to affect the health of the liver, including dining practices, medical supplies, and personal hygiene. Hepatitis B was frightening, partly because it was difficult to eliminate its causal agent in an infected body, which might thus develop more serious conditions, such as cirrhosis and hepatoma. But a more terrible facet of this illness was its apparent association with Koreans' everyday lives. It might easily spread through several kinds of wrong behaviors that Koreans must have taken for granted for many years, such as *suljan tolligi*—the practice of sharing liquor in a glass amid dinner gatherings.

Hepatitis B was similar to other health problems that troubled Koreans. Once called “*hujin ’guk pyŏng*” (a disease of underdeveloped countries), it was akin to various infectious diseases that plagued the nation, such as cholera, smallpox, tuberculosis, typhus, and ascariasis (Sin Chong’u 1982). These problems reflected Korea’s traumatic experiences in the first half of the twentieth century, including its persistent poverty and disastrous warfare that nurtured an ideal condition for spreading various bacteria, viruses, and intestinal parasites (DiMoia 2013; Chŏng et al. 2016; Yŏ et al. 2018; Choi 2018). As a disease problematized in a later decade, hepatitis B was not less dishonorable, as it might symbolize Koreans’ backwardness and widespread unhygienic habits rooted in their past. When Koreans prepared for the Olympic Games at Seoul in 1988, this humiliating condition of their country had to be corrected in order not to embarrass foreign visitors to Seoul.

However, hepatitis B was also related to the country’s transformation in the late twentieth century. Its economic, social, and industrial structure was changing in the 1970s and 1980s during the long dictatorship of Park Chung Hee (1917-1979), who seized power through his 1961 military coup, and Chun Doo Hwan, who staged another coup after Park’s assassination in 1979 (Kim 1991; Campbell 1994; Kim 2004; Kim and Vogel 2013). In this era, hepatitis was a disease that had a close relationship with the state-sponsored export industry, as KGCC and other major corporations, including Cheil and Lucky, sold countless bottles of their

anti-hepatitis vaccines in the international market (Chen 2013, 77). In that sense, hepatitis became a health condition symbolizing the success of the Korean biomedical industry in a developmental state (Woo 1991; Amsden, 1992; Woo-Cumings 1999).

The current historical literature on Korean hepatitis has focused on this development, the formation of the Korean vaccine manufacturing industry. William Muraksin has described how the vaccine producers in Korea cooperated with the international task force team for controlling hepatitis (Muraksin 1995). Richard T. Mahoney, a member of this team, has offered his retrospective account on a “public-private partnership” in developing new anti-hepatitis vaccines in Korea (Mahoney 2005). Tzung-wen Chen has dealt with a different issue, although his focus is still vaccination, especially a comparison between Korean and Taiwanese efforts to build their anti-hepatitis B vaccination policies (Chen 2013). In contrast, Eun Kyung Choi and Young-Gyung Paik’s recent paper offers a more in-depth study of Korea’s internal matters on hepatitis, including the campaign on personal hygiene as well as physicians’ controversies on the timing of vaccination, which reflected “the nation’s future-oriented, developmentalist imaginaries” (Choi and Paik 2017, 100).

Although I generally agree with these historical studies, I have found some issues as well. First, they have not paid enough attention to hepatitis B itself due to their concentration on vaccination. Choi and Paik’s paper does discuss Koreans’ cultural response to the disease, but I am not sure if they have addressed all major questions on it. Second, probably due to their focus on vaccination, they appear to rely on a common assumption on the relationship among biomedicine, disease, and bodies. To them, bodies are just an object of vaccination, and biomedicine is a powerful agency in rescuing human bodies from terrible diseases. From this viewpoint, the proper control of hepatitis through vaccination is a key portion of Korea’s nation-building.

To revisit this relationship with regard to hepatitis B in Korea, I borrow perspectives from the historical studies on the meanings of illness. As Susan Sontag discussed, diseases often carry metaphorical significance in changing contexts. For example, tuberculosis signified poverty and death, while it could also mean romance and sexual appeal in different situations (Sontag 1989, 25-36). Similarly, Alzheimer’s disease stood for a tragedy of middle-class

Caucasian men in America, whereas syphilis and acquired immune deficiency syndrome (AIDS) implied the patients' sexual deviation and perversion that had to be punished (Ballenger 2006; Brandt 1987). What, then, were the implications of hepatitis B in Korea? There have been several studies of the cultural signification and political tension concerning infectious diseases in Korea's colonial or postcolonial history, which showed that infectious diseases and the modern medical management of health represented and constructed the power relations in the peninsula (Kim 2010; Park 2014; Choi 2018). However, the history of hepatitis B in the country has not been investigated from this perspective. For a better historical understanding of this issue, I will describe how the international reputation of hepatitis B as a disease of marginalized people and indigent countries—many of which experienced colonization in the past—shaped its multiple cultural metaphors within the nation, whose contradictions led sick Korean bodies to interact with biomedicine in a complex way.

In explicating this historical process, I will also refer to recent literature on biomedicine. Coined during the interwar period, the term “biomedicine” denotes a complex system of modern healthcare, which involves not only the doctor-patient relationship, but also a network of medical researchers, hospitals, pharmaceutical companies, and governmental agencies, in which healthcare, business, and knowledge production are closely interlaced (Keating and Cambrosio 2003; Waldby and Mitchell 2006; Cooper 2008; Löwy 2011). Adele Clarke and her colleagues even argue that modern American society has been “biomedicalized” after the late twentieth century, as biomedical practices are deeply intertwined with the processes of managing, transforming, and commodifying human bodies and their parts in daily lives (Clarke et al. 2010). Of particular significance in these processes are the functions of the human bodies, which do not become a mere object of professional intervention, but play their own roles in the biomedical network. Of course, it is probably difficult to apply this concept to Korean society in the 1970s and 1980s, but I have found that biomedicine then became closely affiliated with many Koreans' lives, especially when it came to the matter of hepatitis B. With a number of blood sellers and banks as well as medical researchers and pharmaceutical companies tapping into them, hepatitis and the bodies affected by it became highly important in Korea's emerging biomedicine,

although the disease had existed in Koreans' bodies for millennia without provoking much concern.

Investigating this development, I argue that hepatitis B and the Korean bodies contributed to shaping biomedicine that also fashioned their contradictory meanings for the nation under a developmental dictatorship situated in the changing Cold War context. By the "Korean bodies," I mean the bodies of those living in South Korea whose biological conditions—which might involve HBV infection—were intertwined with their cultural identifications. I will show that Koreans' bodies, with their cultural practices, gendered assumptions, and nationalistic concerns, were important in building their country's biomedical investigations, practices, and industries, which had deep implication for the nationhood. Simultaneously, this paper illuminates the contradictions of South Korea under a developmental dictatorship in the Cold War. Starting with Americans' concerns on the poor sanitary condition of the Far Eastern outpost against the communist bloc, Koreans developed hepatitis vaccines and started a movement to change their drinking and dining culture. These efforts were significant in their state's drive for rapid growth of biomedicine and export industry as well as their anti-North politics amid their preparation for the major sporting events in the 1980s. However, what they called a "*hujin 'guk pyŏng*" and its patients, along with several problematized practices including *suljan tolligi*, contributed to the nation's biomedicine and its perceived success in industrial growth and sporting performance. Formulating Koreans' notions of backwardness and progression at the same time, hepatitis certainly carried a stigma to Korean bodies, but simultaneously made ambiguous contributions to their biomedical construction and imaginaries of nationhood.

Hepatitis B in a Savage Country

Although Koreans had long observed the symptoms of hepatitis, including "*hwangdal*" (jaundice), its new biomedical definition came to their country after the Korean War (1950-1953). In September, 1950, the United States Army established its "Hepatitis Center" in Kyoto, Japan, where many American soldiers with the disease were hospitalized, including those who

had been infected during the Korean War. According to a report completed in 1953, the center treated more than 4,000 patients, some of whom were also used for a systematic clinical study of the epidemiology and pathology of hepatitis (Chalmers et al. 1955, 1164). The establishment and use of this facility thus denote two aspects of hepatitis in Korea. As an endemic disease in an impoverished Asian country belonging to the “Free World,” hepatitis was a threat to the health of the United States armed forces, while it offered a great opportunity for biomedical researchers interested in the nature and treatment of the disease.

However, this center and its medical staff did not make a clear distinction between hepatitis A and B, caused by different viruses. It seemed that many of its patients appeared to be suffering from hepatitis A, so-called “infectious hepatitis,” common in military camps. Yet the physicians and medical researchers in the center were unable to classify the disease based on their analysis of the causative agents that remained yet unidentified.

In fact, according the renowned hepatitis researcher Saul Krugman, both types of hepatitis had a long history, although hepatitis A had probably attracted a greater attention before the early twentieth century due to its prevalence during major incidents of warfare, such as the American Civil War and the Franco-Prussian War (Krugman 1976, 199). Whereas this form of hepatitis mostly affected the military personnel in dire hygienic conditions through its oral route of transmission, hepatitis B, called “serum hepatitis,” became a major health problem only after the introduction of modern medical technologies, such as blood transfusion and vaccination. Spreading mostly through contamination in medical practice, it was also called “post-salvarsan” hepatitis, implying its relatively recent discovery and relation to modern technosciences (Krugman 1976, 200). Around the mid-1960s, the American medical researcher Baruch Blumberg found one of the key parts of its causative virus, which he named the “Australia antigen,” reflecting its initial site of discovery, an Australian Aborigine’s serum (Blumberg et al. 1965). But medical researchers then came to realize that the means of transmission was not the best way of distinguishing hepatitis B from A, because it could also be contagious and spread via nonparenteral (oral-fecal or vaginal) as well as parenteral (injection-mediated) routes (Krugman et al. 1967; Hersh et al. 1971).

This worried the American military stationed in Korea, even while Krugman, Blumberg, and Alfred Prince suggested a way of prevention through proto-vaccines (Muraksin 1995, 3, 20). As early as 1962, the United States Army Medical Command in Japan scrutinized 1,906 army recruits at Nonsan, Korea, finding thirty-two hepatitis patients, who “denied having received drugs parenterally during the years prior to the onset of the study” (Prince et al. 1964, 366). Nine of these thirty-two patients had antigens found in serum hepatitis. Thereafter, the United States military tried to protect its own men from such Koreans. As an early measure, they began to inoculate serum gamma globulin to American soldiers arriving in Korea, confirming that it did increase the resistance against the disease (Conrad 1972). Simultaneously, the Walter Reed Army Institute of Research conducted a radioimmune assay on 211 American soldiers in Korea with the hepatitis symptoms, finding that 25 percent of them carried the Australia antigen (Ginsberg et al. 1972, 562).

These studies placed a stigma on Korea and its people. As Muraksin has written, hepatitis B stigmatized various “outsiders” in the West—such as gays, prisoners, drug addicts, and prostitutes—as it was known to spread through both nonparenteral and parenteral routes, namely, with blood, saliva, and semen, which could be exchanged during sexual intercourse or drug abuse using shared syringes (Muraksin 1995, 7). In this context, Koreans as a whole, alongside a large number of Sub-Saharan Africans and other Asians, posed a great problem, as their rate of infection appeared higher than that of Americans, which was just around 0.2 percent.² Concerned over this issue, Marcel Conrad at the Walter Reed Army Institute mentioned Korea and Vietnam as “regions where sanitation is poor,” but these regions still demanded the presence of the American troops in preparation for a possible or actual military confrontation against communists (Conrad 1972, 456-457). In an interview with a Korean journalist, Blumberg even stated that hepatitis was rampant in “savage countries” (*migaeguk*) (Yi Yongsu 1978).

² An examination of 1,133 serum specimens from an American training camp showed that only 3 among them had the Australia antigen. See Ginsberg et al. 1972, 563. Kim Chung Yong claimed that 630 among 7,000 Koreans carried the antigen (9 percent). See “Kanyŏm 60-p’ŭroga hyŏlch’ŏngsŏng,” *Tonga ilbo* (June 10, 1972).

In this sense, hepatitis B was similar to ascariasis, another major condition in Korean bodies that troubled Americans in the mid-twentieth century. As a common health problem in the 1960s and the 1970s, ascariasis emerged as a “shameful disease” stemming from a wrong agricultural practice relying on human feces as fertilizers (DiMoia 2013, 145-176; Chõng et al. 2016). When the frightened American military in Korea refused to purchase Korean vegetables that supposedly carried numerous roundworms, Koreans desperately tried to control it using newly developed drugs. Under these circumstances, both ascariasis and hepatitis B emerged as serious problems in Korean bodies, which therefore demanded an intensive and systematic biomedical intervention.

During this intervention, however, Koreans appropriated hepatitis B in a different way. As many historians have mentioned, the colonized would often appropriate rather than accept stigmatizing metaphors of infectious disease imposed by colonizers (Arnold 1993; Rogaski 2004; Echenberg 2007). Although South Korea was not a colony of the United States, it was still one of the anticommunist countries under the American protection, in which health became a key area of political tension and negotiation. In this context, Kim Chung Yong at SNUH developed the earliest biomedical technology against hepatitis in Korea, yet the disease came to assume a different cultural connotation.

Infected Blood with the National Trademark

In 1935, Kim Chung Yong was born in Hamgyõng province, but his family moved to the South in 1950. Finishing his high school education at Mokpo, he entered the College of Medicine at Seoul National University (SNU), where he completed his medical and scientific training in 1966. Appointed a faculty member of his alma mater in that year, he conducted his early research on the changing patterns of serum protein fractions in hepatobiliary diseases, including cirrhosis, hepatoma, hepatitis, and clonorchis sinensis infection (Kim Chung Yong 1966). As cirrhosis and hepatoma were two major causes of hospitalization at SNUH, there was no dearth of specimen for his research at the hospital (Sõul Taehakkyo Pyõngwõn 1993, 804-820). But he soon came to focus on hepatitis, when he gained an opportunity to work as a

visiting scholar of Harvard Medical School and Boston City Hospital in 1967. There Charles S. Davidson, a renowned medical researcher, recommended that Kim concentrate on hepatitis B, as its morbidity in Korea was one of the highest in the world (Sin Chong'u 1982; Hŏ Sŭng 2016). Hence, Kim, along his colleagues at Harvard, investigated the Australia antigen and its relation to HBV. They purified the antigen and scrutinized its chemical and biophysical properties, which would later enable him to develop a vaccine against it (Kim and Bissell 1971; Kim and Tilles 1973).

Coming back to Seoul in 1970, Kim became the nation's leading authority on hepatitis and related problems in the human liver. After his return, his earlier research at Harvard was reported in a Korean newspaper as "a ground-breaking achievement of our country's medical disciplines," while the Korean Medical Association (KMA) awarded him the Medical Science Prize (*Ŭihaksang*), which further promoted his prestige as the most renowned expert on hepatitis.³ Thereafter, he published numerous papers on liver diseases, using the continuous stream of biopsy samples acquired from his own department at SNUH. Most significantly, his team investigated the presence of HBsAg—which then replaced the earlier term, the Australia antigen—in patients suffering from cirrhosis and hepatoma, demonstrating that hepatitis B could develop into these more serious illnesses (Sŏ Tongjin and Kim Chung Yong 1977).

During these years, Kim placed a large frame in his office with a phrase written in Chinese calligraphy, namely, "*kuin ŭiguk*" (救人醫國), which can be translated as "saving the people, curing the nation" (Hŏ Sŭng 2016). He indeed had a nationalistic goal in mind, as he kept interacting with journalists to disseminate his messages to other Koreans. Each Korean's better liver health was a means of strengthening the nation as a whole. At the same time, he published several review papers in *Taehan ŭihak hyŏphoeji* (Journal of the Korean Medical Association) and other medical journals for physicians less knowledgeable on the problems of hepatitis. These works contributed to the increasing number of articles on hepatitis in both newspapers and medical journals during and after the 1970s, although Kim was not the sole promoter of the anti-hepatitis movement in the country (tables 1 and 2).

³ See "Hyŏlch'ŏngsŏng kanyŏm pairŏsŭ ch'uch'ul," *Tonga ilbo* (March 15, 1971); Kim Chung Yong 1973.

	1940s	1950s	1960s	1970s	1980s
<i>Tonga ilbo</i>	1	0	13	91	397
<i>Chosŏn ilbo</i>	0	1	6	16	92
<i>Kyunghyang shinmun</i>	0	2	11	128	498
Total	1	3	30	235	987

Table 1. The number of articles dealing with hepatitis in three major Korean newspapers from the 1940s to the 1980s. The data were retrieved from three online archives. All false positives were removed. See <http://www.donga.com/pdf/archive/publish.html>; http://srchdb1.chosun.com/pdf/i_archive/index.jsp; <https://newslibrary.naver.com/search/searchByDate.nhn> (accessed on 11 November 2018).

	1940s	1950s	1960s	1970s	1980s
<i>Taehan naegwa hakhoe chapchi</i> (Korean Journal of Medicine)	0	0	7	29	98
<i>Taehan sohwagi pyŏng hakhoe chapchi</i> (Korean Journal of Gastroenterology)	N/A	N/A	1	10	59
<i>Taehan ūihak hyŏphoeji</i> (Journal of the Korean Medical Association)	N/A	0	6	14	36
Total	0	0	14	53	193

Table 2. The number of articles on hepatitis in three relevant medical journals in Korea from the 1940s to the 1980s. The three journals were launched in 1949, 1968, and 1958, respectively. The data were retrieved from each journal's online archives. All false positives were removed. See <http://ekjm.org/articles/archive.php>; <http://www.kjg.or.kr/main.html#>; <http://jkma.kma.org/> (accessed on 30 November 2018).

For Kim, hepatitis B deserved a serious attention in Korea. In particular, his epidemiological survey led him to assert that 630 among approximately 7,000 Koreans bore the antigen of HBV.⁴ This prompted several questions: why did 9 percent of ordinary Koreans have it in their bodies, while only 0.2 percent of Americans were carriers of the same virus? Why were far more hepatitis B patients lining up for treatment at SNUH than Boston City Hospital

⁴ “Kanyŏm 60-p’ŭroga hyŏlch’ŏngsŏng,” *Tonga ilbo* (June 10, 1972); Choi and Paik 2017, 102.

(Kim Chung Yong 1974)? Kim framed these question based on his experience with Americans, who probably taught him what enquiries must be taken place on the hepatitis problem in Korea. In truth, as a member of the research team funded by the United States Army, Kim reiterated the American physicians' conventional viewpoint on Korea's poor sanitation, although he was able to provide his own analysis based on his familiarity with the Korean culture (Kim and Bissell 1971).

In several newspaper articles and medical papers, Kim indeed pointed to a number of issues in his country. To his eyes, there were many problematic facilities and practices in the country, including the inadequate water supply and sewage systems, public swimming pools with questionable hygienic standards, and overcrowded residential districts (Kim Chung Yong 1974). Koreans also tended to share “*yaksu*,” water from natural fountains, with other people during their casual hiking (Kim Chung Yong 1979b). Equally problematic was the practice of counting bills by wetting their index finger with their saliva. From his standpoint, these practices constituted the ideal condition for dissemination of HBV, which could spread through the nonparenteral routes. Interestingly, he surmised, blood transfusion by itself might not be a major cause of endemic hepatitis B in Korea, despite the earlier term for the disease, “serum hepatitis” (Kim Chung Yong 1974; Song Insöng and Kim Chung Yong 1979). It was unlikely that Koreans received far more blood during surgical operations than Americans did. Yet there still appeared to be a major defect in blood transfusion in Korea, because most of the blood used for surgical purposes came from indigent backstreet blood sellers (*maehyölja*), who made a living by peddling their own blood which might often carry syphilis or hepatitis due to their poverty and lack of education.⁵ Although the Ministry of Health and Human Services had already announced its plan for reducing blood sales in favor of donation in 1971, blood sales was not immediately banned, and Kim mentioned it as a major factor contributing to recurring infection of hepatitis B in his country (O Ponghwan 1973).

However, Kim later recollected, “such an environment ironically led me to conduct my research well” (Kim Ch’öljung 2009). The abundance of those willing to offer their blood for

⁵ “Kun pyöngwön e hyöraek kigün,” *Tonga ilbo* (November 25, 1970).

cash led him to acquire both HBsAg for his vaccine production as well as human bodies for experimental inoculation in the 1970s.⁶ Initially, Kim gained a sizeable amount of HBV from “ten blood sellers who appeared normal” but were infected (Kim Chung Yong 1979a, 1014). He soon produced the vaccine by processing this virus particle, and inoculated it into 115 non-infected blood sellers, who agreed to participate in his project. After an observation from twelve to forty-two months, he obtained a remarkable result of this experiment: compared to 12 out of 75 people in the control group who eventually exhibited clear signs of hepatitis, only 1 among 115 in the experimental group developed the disease.⁷ This finding pleased him, especially because it was the earliest success in the production of an anti-hepatitis vaccine in Korea, which KGCC would mass-produce in 1983 only after Merck and Pasteur did. Furthermore, he found that his vaccine was more effective than another product under development in Japan, whose general state of medicine appeared superior to that of his country. But there were several issues in this apparent success. Most of all, some would raise eyebrow despite the informed consent that he received from his subjects, because Kim did nothing to protect his subjects from hepatitis, even with his awareness of their risk of infection. Underlying this ethical problem was an assumption that it was quite easy for Koreans to contract hepatitis in their daily lives. In particular, the Korean blood sellers ran a greater risk of infection during their frequent business of blood sales conducted in facilities with lesser hygienic condition. Overall, there were many issues in Korea related to his research, including blood sales, hygiene, and even research ethics, but all these problems of an underdeveloped country “ironically” contributed to his success.

This work remained a key landmark in Kim’s career. When the vaccine began to be mass-produced by KGCC in 1983 after a long process of chimpanzee testing and administrative delays, he received the Presidential Science Award from the Korean government.⁸ In the next year, the government decided to confer him another accolade, the Order of Civil Merit, Peony

⁶ It is unclear when Kim started this project. His 1979 paper stated that it was in 1977 that he orally presented the final conclusion of his work that included forty-two months of observation after an experimental inoculation. See Kim Chung Yong 1979a, 1013-1015. According to an account in 1983, KGCC and Kim began their cooperation in 1972. See “Kanyŏm yebang paeksin Noksipcha sŏ kuksanhwa hada,” 182.

⁷ Kim also inoculated his vaccine to a separate group of volunteers, via the oral route. Yet this experiment showed a less clear result. See Kim Chung Yong 1979a, 1017.

⁸ “Kwahak kisul sang palp’yo,” *Tonga ilbo* (April 19, 1983).

Medal, which further elevated his prestige.⁹ With these and other awards from various organizations in Korea, Kim became a rising star standing for the country's biomedical development.

In truth, the Korean state had to give due recognition to this achievement of Kim's, as it represented the success of the biomedical side of its developmental drive. Starting with President Park Chung Hee's dictatorial regime (1961-1979), South Korea indeed pursued a strategic governmental sponsorship of technoscientific investigations for its rapid industrialization and economic growth (Woo 1991; Kim 2004). Especially in Chun Doo Hwan's regime—which regarded Korea's major corporations as its key partners rather than vassals in forming the nation's developmental strategy—marketable research such as Kim's was most welcome (Campbell 1994; Kim and Leslie 1998). In this context, KGCC launched Hepavax in the international market, followed by other biomedical companies, including Cheil and Lucky, which also began to develop and sell their own vaccines, especially to Southeast Asian countries (Mahoney 2005, 131-135; Choi and Paik 2017, 106-108). Then, the hepatitis vaccine became one of the crucial items of Korea's "cutting edge-technology" (*ch'ōmdan kisul*) discussed during the administrative meetings of Chun, who even visited a vaccine laboratory to inspect its progress.¹⁰ Fortunately, the Korean vaccines proved to be competitive due to their considerably low prices, although some foreigners continued to suspect the efficacy of these "cheap" products alongside the general scientific prowess of the country manufacturing them (Muraksin 1995, 8, 43).

Kim seemed well aware of this issue, and tried to defend the reputation of the Korean vaccines in public. Although there is no record that he ever attempted to allay the doubts of overseas consumers, he answered questions raised by some Koreans, who might also prefer more expensive products from the American or French companies to domestic ones. To him, the Korean vaccines' lower prices did not mean that their quality was also lower. It merely reflected the abundance of HBsAg in Korean bodies, which were the key component of the vaccines. He said, "The natural resource for producing anti-hepatitis B vaccine production was more than one

⁹ "Che-12-hoe pogŏn ūi nal yugongja p'yoch'ang," *Maeil kyōngje sinmun* (April 7, 1984).

¹⁰ "Wōnjōn anjōn kisul kaebal," *Tonga ilbo* (February 11, 1983); (Yun Ku 1983).

hundred times abundant in our country than America, as approximately 10 percent of our populations are carriers of the virus” (Kim Chung Yong 1984a, 268). Whereas the pharmaceutical companies in America or France were already suffering from the depletion of their “natural resource,” it was unlikely that Korean businesses would have the same trouble in the near future. The Korean vaccines would remain available and cheap, because the country’s people kept suffering from rampant hepatitis B infection. Ironically, their sick bodies would keep Korea’s biomedical industry strong and competitive.

Furthermore, the Korean vaccines were particularly good for Koreans although they were generally proven safe and effective for everyone in the world. The vaccines manufactured from Koreans’ blood plasma were more compatible with their own bodies, because they supposedly had the subtypes of HBV found only in their country. KGCC even advertised Hepavax as a vaccine free from “terrible diseases coming from foreign bloods” (Kim Chung Yong 1984b, 212). Such claims echoed the ideal of “*sint’oburi*”—that the food from the native soil was the best for the body living on that soil—a traditional Buddhist concept that the Korean government and farmers would appropriate during their campaign against imported foods (Cwiertka 2012, 125-135). Like the Korean foodstuff, HBV became “Korean,” and gained a trademark, rather than a stigma.

The Nation’s Illness

But hepatitis B became an even greater threat in the 1980s, when Kim and his colleagues were actively promoting their new vaccines. The number of articles on hepatitis in both newspapers and medical journals dramatically increased in the 1980s (table 1 and 2), and many Koreans were terrified by some sensational reports among them. For example, an article in *Tonga ilbo* declared that “97 percent of Koreans exhibit the signs of past infection of hepatitis B,” by citing a recent medical report that 61 out of 63 healthy people under study carried anti-HBsAg, which could not have been formed without contacting HBV at some points in their lives (Yi Yong 1982). Of course, this article mentioned just one case study, but that was intimidating enough to many readers. Indeed, it was well known, there was no sure way to eliminate HBV in

the body after infection, and some unfortunate cases would develop into cirrhosis and hepatoma. Worrying deeply about these issues, a member of the National Assembly yelled at staff of the Ministry of Health and Human Services during an official government meeting: “There is no medicine if you contract hepatitis. You will simply die! It’s a terrible disease” (Kim Want’ae 1983).

In this context, Korean doctors had to treat an increasing number of patients worrying about their possible or actual infection. They found that many patients were suffering from an excessive anxiety (*kongp’ojŭng*) on the disease during their everyday lives (An Tŭksu 1983), and some of these anxious people were quite willing to wait for six months to meet Dr. Kim—known now as “Dr. Liver”—despite the fact that his main achievement was in the prevention, not treatment, of hepatitis (Kim Chung Yong 1984b). Kim’s hospital, SNUH, also admitted 420 inpatients of chronic hepatitis in 1981, making it the eighth major cause of admission in the year (Sŏul Taehakkyo Pyŏngwŏn 1993, 821).

When the concern was deepening, however, the Korean government during the 1980s did not choose to introduce a national plan for compulsory neonatal vaccination against hepatitis B, which then turned out to be the most effective way to curb infection, especially through the vertical transmission of HBV from mother to baby. While Taiwan was quick to start and carry out this plan as early as 1986, Korea had to wait until 1995 (Chen 2013). Why, then, was there such a long delay in Korea? According to Choi and Paik, the reason should be found in the persistent confusion and controversy in the country, especially among physicians (Choi and Paik 2017). In truth, it was hard to claim for an immediate introduction of a national neonatal vaccination program, because most physicians preferred adult vaccination and lifestyle reform, until Kim Chaeha, a Korean doctor in Japan, and other overseas experts argued for a systemic inoculation into newborns guided by the state (Kim Chaeha 1985).

An additional factor should be found in the state of the national health insurance and the conservative governmental officials, especially those working for the Ministry of Health and Human Services and the National Assembly. In effect, it was only in 1977 that the Korean government started its health insurance service for its citizens, and its budget and coverage remained limited for many years. In 1983, the ministry thus stated that the anti-hepatitis B

vaccines were still too expensive, and the government did not have enough fund to enforce their universal inoculation (Yi Hŏn'gi 1983). Furthermore, from the ministry's point of view, hepatitis B was not contagious enough, as it was "not transmitted through air" (Kim Pyŏngsu 1981). In the National Assembly, Kim Moim from Chun's Democratic Justice Party (Minju Chŏngŭidang) agreed with these points by asserting that neither America nor Japan, the two countries that might be the models for Korea, was implementing universal vaccination (Kim Moim 1983).

Under these circumstances, the Korean government proposed an inadequate national strategy for controlling hepatitis B. In December, 1983, the government announced its "five-year plan," aiming at vaccinating 40 percent of the entire population—focusing especially on public officials, teachers, primary school students, and employees in restaurants and hotels—but this elicited heavy criticism from politicians as well as physicians (Han et al. 2011, 126-127; Choi and Paik 2017, 109-112). As I have mentioned, Kim Chaeha then denounced its goal of covering the whole population including adults rather than a more significant target group, the newborns. Furthermore, the plan aimed at reducing the proportion of carriers from 9 to 1 percent by 1988, which, to a member of the National Assembly, was very unrealistic (Yi Chŏngbin 1984). How could the government make more than three million carriers in the country disappear in just five years? In addition, the government did not have any concrete financial scheme for the plan. "As a short-term measure," the government merely urged all Koreans to inoculate themselves at their own cost, except for the babies born into families suffering from hepatitis, who would be offered free vaccination by 1985.¹¹ Probably, the use of disposable syringes was then the only item supported by the government through the national health insurance (Paek Yonggi 1982; Han et al. 2011, 129).

While Koreans failed to enact a universal neonatal vaccination program, they were more successful in investigating some non-universal facets, not of vaccines, but of hepatitis itself, by scrutinizing the distinct disease susceptibility of people with different social identity and position. Under the broad category of "Koreans," there were indeed various subcategories,

¹¹ See "Kanyŏm pŏm kungmin yebang chŏpchong," *Kyunghyang shinmun* (December 2, 1983); Yi Ch'ungsik 1984. Due to the aforementioned criticism, this plan was cancelled in 1985. See Chen 2013, 78.

divided by class, region, gender, and occupation, if not race—which was not then deemed relevant to a country of a supposedly single ethnic origin. After all, Western epidemiologists already claimed that hepatitis was not a universalizing disease. It was a trouble for underprivileged and disadvantaged people in society. From a global perspective, Koreans as a whole might perhaps constitute one group of such people if their country was still a “*hujin’guk*” (underdeveloped country), but they tried to figure out differential impacts of hepatitis B within this country.

To some Koreans, these differential impacts were real. As early as 1972, Chŏng Hwan’guk, another major scholar on hepatitis at Catholic University, reiterated American physicians’ view that hepatitis was a disease common among peasants, drug addicts, and feeble-minded children (Yu Panghyŏn 1982). The concern that indigent blood sellers often carried the hepatitis virus reflected the same view, which continued in the 1980s. During a round-table discussion in 1983, Sin Sŏgu at the Ministry of Health and Human Services also claimed that hepatitis was “more frequent in low-income than high-income groups,” when Ch’oe Hŭngjae at Yonsei Medical School said that it was more likely to affect slum dwellers with “lesser hygienic sensibility” (Yi Hansŏng 1983a). To them, hepatitis B was a disease of uneducated, impoverished, and misbehaving people.

However, Korean medical researchers’ work complicated this issue in the 1980s, as many of them reported that hepatitis B was not a disease of the lower end of society. For example, a team at Yonsei University counted the number of carriers of HBsAg among 403 coal miners with an assumption that “the occurrence of HBvirus markers increased in the poor sanitary condition,” but found that coal miners were not different from other Koreans in terms of infection rate (No et al 1984, 1469). A physician at Chonnam National University also investigated the differential rates of HBsAg among 2,849 people living in rural, urban, and coastal areas respectively, finding that their difference was “not statistically significant” (Son Sŏkchun 1986, 45). At Hanyang University, another physician scrutinized the occurrence of HBsAg of 475 children from families of different income levels, but concluded that their parents’ wealth had nothing to do with their infection frequency (Ch’oe Poyul 1986). Furthermore, a research group at Soon Chun Hyang University studied the HBV infection rates

of medical staff members, office employees, and manual workers, and reported that medical staff and manual workers showed the highest and lowest rates, respectively (Yi Sŏnghŭi et al. 1985). To be sure, the elevated occurrence of hepatitis among medical staff was a well-known problem (Muraksin 1988). As they treated infected patients, they were often exposed to HBV. Yet an intriguing point of this study was that the relationship between hepatitis B infection and economic status seemed complex, since the group with the least education and wealth, the blue-collar workers, were less frequently infected than the others, including the medical staff with the highest levels of education and living standards.

The occurrence of hepatitis B had a more straightforward pattern with regard to gender and sex. Most studies published in the 1980s consistently reported that HBsAg were found more often in men than women, reflecting that the former were more closely engaged with “social activities” (*sahoe hwaldong*) that increased their exposure to HBV (Ch’oe et al, 1983, 166). But a particular group of women was an exception. A team of physicians at Deagu investigated the rates of HBV infection of nuns, pregnant women, and prostitutes, finding that prostitutes’ rate was the highest, followed by pregnant women and nuns (Pak et al. 1986). This result was not surprising, because HBV infection through semen was a well-known medical fact. Yet the crux of this paper was its detail. This paper further divided the prostitutes in accordance with their “customers,” showing that those dealing only with American soldiers exhibited lower hepatitis infection rate than those serving Koreans.

These studies illustrated the cultural characteristics of hepatitis B in Korea during the 1980s. The relation of hepatitis to class was far from clear, since the disease might not be a unique trouble for peasants, coal miners, or other blue-collar workers with lower levels of education and income. Likewise, its occurrence among feeble-minded children or drug addicts in Korea was not yet confirmed through research, while region did not have any relevance to infection rate. In contrast, the relation of hepatitis to prostitution was more clearly known. However, there was little point to blame only the prostitutes, because their viruses, in many instances, must have come from their Korean customers, who were all men. Yet it was hard to accuse these men, either. They came to carry HBV, because of their “social activities,” required

for their lives as breadwinners. To them, hepatitis B was a necessary evil that accompanied their work for the family.

In this sense, hepatitis was gendered in Korea, and Kim Chung Yong clearly highlighted this facet from his standpoint. In his handbook titled, *Hepatitis Can Be Cured* (1984), Kim stressed the gendered implication of hepatitis through a series of hypothetical conversations between him and his readers, most of whom were supposed to be men. According to this book, Kim often asked his male patients how well they were performing in their “marriage relationship” (*pubu saenghwal*), because “patients with sick liver do not desire women” (Kim Chung Yong 1984b, 20). In no part of his book, Kim ever mentioned women’s sexual desire, as if hepatitis would affect only men. This view was apparent in a different section of his book on eyesight and hepatitis as well. In this section, he agreed to add an illustration on the decline of eyesight after hepatitis infection, which further articulated the perceived nature of the disease as men’s illness in Korea (figure 1). Hepatitis was troublesome, because it weakened the eyesight of men, who were the subject of gaze. By contrast, women were merely the object of this gaze, and were not even visible in the following illustration.

Figure 1. “The weakened liver weakens eyesight as well” (Kim 1984b, 28).

This view was not strange in the 1980s, when Chun Doo Hwan implemented so-called “3S” (Sports, Sex, and Screen) policy to divert people’s attention away from his dictatorial regime. Unlike his predecessor known for the notorious “miniskirt censorship,” Chun did loosen the state control of sexuality, but it was more relevant to men than women. With many softcore pornographies available in theaters featuring women’s naked bodies, men’s sex drive was

actively encouraged, although it could also increase the occurrence of hepatitis B, which might in turn limit the men's sexual appetite. In this pathological cycle, biomedical intervention appeared to play an essential role.

However, a greater trouble of hepatitis to men was its impact on their work capability, which was considered the core of Korea's national productivity. Kim's book referred to this issue several times, including a question by a "highly reliable, socially respected, and hard-working man in his forties," who needed a consultation on the way of preventing hepatitis (Kim Chung Yong 1984b, 74). To such people, hepatitis could be a disaster, as it would critically limit the scope of their work, including their overseas businesses. It was thus no coincidence that the man in the above illustration was wearing a suit and tie, as if he was one of these men active in their career (figure 1). Of course, Kim never meant that only men contracted hepatitis. What he implied was the importance of men's role, as they were economically more relevant to a country with "gendered citizenship" (Moon 2005).

Other leading figures in public health and medicine shared this concern with Kim. Pak Sangbin, a main reviewer of the national health insurance, claimed that hepatitis B meant a "loss to our workforce and a significant deficit in in the national economy" (Pak Sangbin 1983). An Tŭksu, a specialist of internal medicine, also deplored the "loss of workforce" as well as "social, economic, and cultural deficit" due to the dissemination of hepatitis B (An Tŭksu 1983). Similarly, the editorial board of *Ŭihyŏp sinbo*—KMA's official newsletter—highlighted that hepatitis B was a central factor hampering the nation's fifth five-year plan for economic development, in which the general health of its workforce played a crucial role (Yang Yŏngsŏk 1981). In this sense, a public report in 1983 called hepatitis B the "nation's illness in the twenty-first century" (*21-segi kungmin pyŏng*) (*Ŭihak sinbo* 1983). The disease was not a disease only of the indigent or uneducated in Korea. It affected a large number of people in the country, including those constituting the crucial workforce of the nation, who were mostly adult men active in their career. If biomedicine could not control the disease, the nation would fail in its further progress that must continue in the "twenty-first century."

In effect, hepatitis B was a crucial disease representing the nation's evolution, connecting its past and present as well as future. As a physician remarked during a roundtable

discussion organized by KMA, hepatitis was a disease symbolizing a certain degree of advancement in the medical sciences (Yang Yöngsöck 1981). While tuberculosis and intestinal disorders had been major illnesses in Korea's past, hepatitis was a new malady in the age of better scientific management of health. Similarly, another physician mentioned hepatitis as a novel disease in the 1980s, after Koreans had succeeded in controlling other ailments, such as polio, typhoid, tetanus, and measles (Yun Tökchin 1982).

However, these views beg a question. Was hepatitis B not a "*hujin 'guk pyöng*"? Was it not a disease of "savage countries," as Blumberg mentioned? Yet the distinction between developed and underdeveloped countries might be flexible and relative. In the aforementioned roundtable discussion, a doctor claimed that hepatitis was a stepping-stone to other illnesses in richer foreign countries, such as cancer and cardiovascular disorders. Korea might not yet be one of them, but would surely join their league in the twenty-first century. From this forward-looking developmental perspective, hepatitis was a sign of the nation's progression rather than backwardness.

This developmental perspective accompanied another meaning in the metaphor. In the early 1980s, hepatitis was a serious national malady that troubled Koreans preparing for the two major sporting events, the Asian and Olympic Games in 1986 and 1988 respectively. Hepatitis was a disease of the future, because its prevalence could ruin Koreans' efforts to promote their nation to foreigners, who would soon come *en masse*. Biomedicine would thus play an important role in controlling the disease, but Koreans were not just subject to its reign in their everyday lives. Rather, biomedicine itself was constructed by the cultural anxiety on Korean bodies seen by foreigners.

Please Do Not Share Glasses

The national campaign against *suljan tolligi* illustrated the place of biomedicine in the country. In the 1980s, physicians, journalists, and public officials joined forces to argue against a traditional Korean practice of sharing glasses in drinking alcoholic beverages. They blamed this perceivably longstanding custom in the country as a major cause of the dissemination of

hepatitis B, because they thought that the biomedical sciences clearly demonstrated the role of saliva in transferring HBV from person to person. During the decade, the message from the sciences was so strong that even a four-frame comic strip in a newspaper referred to it in the second frame—even prior to the matter of vaccination mentioned in the third—when the newspaper reported the Korean government’s announcement of its five-year plan on hepatitis (figure 2).

Figure 2. Panic on the day of announcing the five-year plan against hepatitis B. (Kim P'an'guk 1983).

Yet *suljan tolligi*, as a term, seemed quite recent, although several scholars have stated that it had an ancient root (Chŏn Wan'gil 1987, 276-284; Han T'aesŏn 1998, 50-56; Wŏn Yongju 1999, 11-18). Korea probably did have a culture of sharing alcoholic beverages in a cup, but this was not unique in the country, as Westerners also had a culture of sharing a communion cup during their Christian ritual (Tomes 1999, 132-133). In Korea, I found, the term first appeared in the early 1970s alongside an increasing number of scientists' and physicians'

overseas experience and concomitant concern over their culture compared to that of other countries.¹² In 1970, Chŏn Hakche, director of the National Science Museum, criticized Koreans' excessive drinking accompanied by *suljan tolligi*, which did not seem to exist in West Germany where he studied (Chŏn Hakche 1970). It was a wasteful and exorbitant practice found only in Korea. Similarly, a physician claimed that *suljan tolligi* was problematic, not just for its usual consequence—binge drinking—but for its association with Korea's collectivist and exclusive culture (Yi Kyudong 1975). He argued that *suljan tolligi* was a means of consolidating Koreans' internal boundaries that excluded those outside of their gathering. *Suljan tolligi* also became a scandal at the airport where Koreans would leave their country to meet foreigners. An observer criticized what many Koreans then did at the Kimpo Airport in Seoul while bidding farewell to their friends or family members going overseas. It was shameful that Koreans often shared glasses and ate together before departure at the airport, which thereby looked like a "rural marketplace" (*sigol changt'ŏ*) rather than the nation's gateway to the world (Pak Kyŏngsong 1980).

This concern became more serious in the 1980s, when *suljan tolligi*—together with the custom of scooping soup (*kuk*) in a single bowl with each person's spoon—became associated with hepatitis B in Korea during its preparation for the Asian and Olympic Games. In this decade, *suljan tolligi* was understood in a biomedical term, but its significance was cultural in nature. Above all, a politician asserted that HBV and other contagious diseases in Koreans' bodies should be a great nuisance to international guests and would make them lose their face (Mun Pyŏngnyang 1981). Likewise, a journalist argued that "we should overcome this shameful condition as soon as possible, as we are soon hosting...the 86 Asian and 88 Olympic Games." The best measure for this preparation was a wholesale sanitary reform, including an immediate discontinuance of "*suljan tolligi*" (Yi Hansŏng 1983b).

Yet a historian claimed that there was no reason for Koreans to blame themselves for spreading the disease with their *suljan tolligi*, because the ancients in the Puyŏ Dynasty had always washed their cup before sharing it with others. Although this good practice curiously

¹² As John DiMoia has discussed, many scientific and medical personnel then went to the United States and Europe for further training and education. See DiMoia 2013.

lapsed for unknown reasons, Koreans must be proud of their own tradition “in an age of increasing international attention to them” (Chŏn Wan’gil 1987, 7). With more foreigners observing Koreans in the 1980s, *suljan tolligi* must be regarded the nation’s great tradition representing their spirit of mutuality, although it was unjustly blamed due to its association with a disease, for which their admirable ancestors were not responsible.

These cultural and national concerns accompanied what they regarded as scientific evidence. As I have mentioned, Kim Chung Yong had already mentioned the significance of saliva in hepatitis infection in the 1970s. In the 1980s, he and other physicians consistently stressed the role of saliva in the dissemination of HBV, and some of them actually conducted research to confirm the presence of HBsAg in hepatitis patients’ and carriers’ saliva.¹³ Furthermore, most foreign experts whom they respected appeared to agree with them. Most significantly, Saul Krugman and his colleagues asserted that serum hepatitis was “communicable...and infective by mouth” (Krugman et al. 1967, 372). A team of physicians at Baylor College of Medicine also stated that hepatitis B seemed to move via “the fecal-oral route” between married or unmarried couples (Hersh et al. 1971, 1364). Similarly, another group of researchers at the National Institutes of Health demonstrated that chimpanzees inoculated intravenously with saliva from hepatitis B patients exhibited HBsAg in their bodies (Alter et al 1977).

However, the cultural anxiety on Korean bodies appeared to shape their scientific knowledge on *suljan tolligi* rather than the other way around, because later research conducted overseas showed that saliva was not a medium for HBV’s movement. After all, none of the aforementioned studies demonstrated that HBV could remain infective when it entered another host’s mouth through saliva. In this situation, William Bancroft and his colleagues in America and Thailand found that no animals were infected with hepatitis B through the oral route during their extensive experiments in the late 1970s (Bancroft et al. 1977; Scott et al. 1980). A research group at Minneapolis also investigated the saliva-mediated HBV infection via contaminated musical instruments shared by students, but no evidence was found (Osterholm et al. 1979).

¹³ Yu Kŏn and Kim Chung Yong 1980; Paek Yonggi 1982; Kim Chung Yong 1984b, 98; Yi Sang’in et al. 1985. See also, “Suljan tolliji mapsida,” *Tonga ilbo* (December 2, 1982).

Reviewing these studies, O. Noël Gill at Britain's Public Health Laboratory Service thus concluded, "neither infection with hepatitis B virus nor HIV can be transmitted directly via saliva" (Gill 1988, 3). Why, then, did Korean physicians in the 1980s ignore these works in favor of earlier ones with inconclusive results? There is no clear answer, but it is highly probable that the physicians shared the same cultural anxiety with others in the country, when they mentioned hepatitis B and its transmission via saliva. A professor at Yonsei Medical School indeed claimed that *suljan tolligi* was deeply enmeshed within Korea's collectivist culture, but it would embarrass foreigners visiting Korea in the forthcoming years (Mun Yǒngmyǒng 1983). As *suljan tolligi* was culturally shameful and medically dangerous, there should be a nationwide movement against it.

This movement appeared to have changed some people's daily lives, although certain physicians, who appeared aware of the latest foreign medical reports, asserted that *suljan tolligi* was irrelevant to hepatitis B. According to a newspaper article in 1983, there was a considerable shift in the "drinking cultures in afterhours" (Mok Chǒngsu 1983). Realizing the significance of hepatitis B, some white-collar workers began to refrain from *suljan tolligi*, when drinking itself might have become less frequent. In the 1980s, this concern spread to schools as well, although the object of reform was not liquor glasses. A school teacher, for instance, asserted that it was important for each student to have their own cup in classrooms, because shared cups seemed to be the major cause of hepatitis infection among children (Kim Chǒngsun 1984). Amid this movement, however, Kim Chaeha claimed that "*suljan tolligi* was unrelated to hepatitis B" (Kim Chinsu 1985). Denouncing the entire public campaign against hepatitis in Korea, he argued that it just stemmed from the fear that "foreign visitors to Seoul during the Asian and Olympic Games will brand Korea as a contaminated country." However, few listened to this opinion, even though another part of his claim—the critique on adult vaccination—eventually brought about the demise of the five-year plan. In fact, it was only after ten years that the Korean government and physicians understood what he meant. In a publication of 1995, the Ministry of Health and Human Services listed several kinds of "incorrect health information," including the idea that *suljan tolligi* was a cause of spreading hepatitis B (Yi et al. 1995, 6).

But this public announcement did not bring an end to the campaign against *suljan tolligi*. Once shaped by a cultural concern on Korean bodies, the campaign earned its own inertia by integrating with biomedicine. *Suljan tolligi* was wrong due to its violation of the rules of scientific hygiene, even though some continued to blame it in association with Korea's collectivist culture. To be sure, many Koreans kept asserting that hepatitis B could spread via saliva throughout the 1990s (Kim Sangwŏn 1998). Afterwards, when hepatitis B began to attract less attention, *suljan tolligi* was spotted as a major cause of other illnesses highlighted in the twenty-first century, such as swine flu and the helicobacter infection (Pogŏn Pokchi Kajokpu 2009). The history of this shift is beyond the scope of this paper, but it illustrates how the continued social concerns over Koreans' bodies could shape—rather than was controlled by—biomedicine.

Phoenix Rising from Hepatitis

The movement against *suljan tolligi* was just one instance of increasing significance of biomedicine in Koreans' daily lives, which can be called “biomedicalization” (Clarke et al. 2003). With the deepening public concerns over hepatitis B, their lives were biomedically scrutinized and redefined. For example, some people might feel drowsy in the spring, but it might not be a symptom of “spring fever” (*ch'un'gonjŭng*), but a sign of hepatitis (Sŏng Haun 1985). Unemployed people might also regard their lethargy as a consequence of their frustration after losing the jobs, but this could likewise be a result of their liver's malfunction due to hepatitis B (Kim Chung Yong 1979c). Yet an even greater trouble awaited such people, as many employers in Korea, including the government, made the hepatitis B screening compulsory before job offer.¹⁴ The government also announced that they would crack down on all restaurants that would not use individualized dishes and bowls, which were deemed essential for preventing saliva-mediated contamination, although it was unclear to what extent this was enforced.¹⁵

¹⁴ “Chŏnyŏmsŏng kanyŏm simbujŏnjŭng simp'yejŭng paekhyŏlbyŏng hwanja kongmuwŏn ch'aeyong ank'iro,” *Tonga ilbo* (April 21, 1984).

¹⁵ “Kungmul tŭn panch'an ūmsikchŏm sŏ kaein pyŏl chegong,” *Tonga ilbo* (February 1, 1984).

However, Korean bodies were not just an object of biomedical surveillance, as they also made their own contribution to biomedicine by becoming natural resources of research that became the basis of these enforcements. In addition to Kim, who relied on the abundance of hepatitis patients for his vaccine development, other Korean medical researchers enjoyed a great benefit from the hepatitis situation in their country. When few of them could yet afford experimental animals for their research—including chimpanzees or gibbons with high price tags—they could have an easy access to the bodies of their patients. Many of the increasing number of medical journal articles published in the 1970s and 1980s reflected the use of such patients visiting the researchers' clinics (table 2).

Some portions of sick Korean bodies were also integrated with the increasing biomedical commodification. The aforementioned vaccine production was a good example of this process, but there was another, less visible, development: Kim once suspected that blood plasma collected through apheresis—a technology of separating components in blood—might not be ideal for transfusion, because it could contain some portions of blood from hepatitis carriers or patients (Yu Panghyŏn 1972, 112). As early as in 1981, however, KGCC could use such blood, especially from the placenta after childbirth, to manufacture commercially available medications, including gamma globulin against hepatitis (Yi Yongsu 1981). This development, I think, also illuminated a part of the nascent biomedical industry in Korea. As several sociologists have mentioned, human body parts could gain and increase commercial values during their passages through various laboratories, clinics, and corporations (Waldby and Mitchell 2006; Cooper 2008). Koreans' blood had already had its cash value with their practice of blood sales, but its value substantially increased with its further processing in major biomedical corporations, which also commodified some hitherto-abandoned organs like the placenta. Of course, Korean biomedicine was still in its infancy in the 1980s, but its nascent form was then emerging.

Such multiple roles of sick Koreans' bodies did not seem initially obvious in sports, which also became closely associated with biomedicine. In the 1980s, many sports players were found suffering from hepatitis, and biomedicine led to their quick removal rather than acquiring any contributions from them. This started with Pak Sŏnghwa, a major member of the national

soccer team, who suddenly fell ill with the symptoms of hepatitis found during his training in 1980 at Los Angeles.¹⁶ His return to Korea for an immediate hospitalization implied an impending failure in the upcoming Olympic Games at Moscow. Mun Kwanyong, a renowned volleyball player, also contracted hepatitis right before joining the national team for a major international competition in 1982. A photo of Mun lying down on a hospital bed was shown in the mass media with the title, “Bed-ridden Men’s Volleyball” (Yi Kōnsil 1982). Similarly, when two boxers in the national team, Kim Tonggil and Chōng Yongbōm, contracted hepatitis in 1983, they “had to pull on Ringers’ solution rather than their gloves” (Ch’oe Hwagyōng 1983). They were not able to continue training, because they could not “expect recovery from the symptoms, which would worsen through physical exercise,” according to their attending physician. In this situation, Koreans worried that biomedicine could be abused by corrupt sports administrators uninterested in doing their best for the nation’s victory. For example, when Malaysia defeated Korea during the World Cup regional qualification tournament in 1985, the mass media blamed Mun Chōngsik, the manager of the national team, for manipulating the health record of a star player, who was unjustly eliminated from the team due to HBV that he did not have (Yi Chongse 1985).

Why, then, did so many athletes with hepatitis appear in Korea at the time, if the disease had long been endemic in the country? I have found that this apparent pandemic in the 1980s was related to the intentions and activities of Chun’s administration in the changing Cold War politics. Above all, sports was a key item in its “3S policy,” which attempted to use star players’ performance as a tool of dumbing down Koreans and advertising its own success to international audiences during the Asian and Olympic Games (Joo 2012, 45-50). The success of the 1988 Seoul Olympic Games was indeed important, as it should be a real global event, in which several communist countries—including East Germany and the Soviet Union that had boycotted the 1984 Los Angeles Olympics—would participate. When many believed that this signaled the upcoming end of the Cold War, North Korea, however, remained an exception and even tried to hamper South Koreans’ efforts, at least from their perspective. In this context, hepatitis emerged

¹⁶ “Chōnji hullyōn Pak Sōnghwa kanyōm ūro kwiguk,” *Tonga ilbo* (February 14, 1980).

as a significant problem, as it could severely affect those who were expected to “demonstrate the superiority of the Korean nation” (*hanminjok ŭi ususŏng*) to the international audiences, in defiance of the North’s “sabotage tactics” (*panghae ch’aektong*) (Kim Tuhwan 1985). Hence, there was an extensive scrutiny of athletes’ blood, especially prior to their encounter with North Korean players during international events. For instance, Yi Kyesŏn, a South Korean table tennis player, recollected that her blood was tested for the hepatitis antigen, right before she flew to Bahrain, where she would meet the North Korean team.¹⁷ When her blood was later found to contain HBV, she had to endure a long struggle in her subsequent career. Many of such players had to quit or rest, because they could potentially infect other healthy athletes. Hepatitis was embarrassing and threatening, and demanded a speedy biomedical mediation.

But some of these athletes did come back to the arena after overcoming their illness. Most notably, An Pyŏnggŭn, a lightweight judo practitioner, competed in the 1984 Los Angeles Olympic Games as a representative of Korea and won a gold medal. Then, many Koreans were deeply moved by his life story, including his long fight against hepatitis that once made him leave the national training camp at T’aenŭng (Yi Chongse and Chŏng Kojin 1984). Kim Sŏngmun, a wrestler, also played well, even though he could not completely recover from hepatitis that he had contracted during his preparation for the Seoul Olympic Games. Although he won a silver, not gold, medal in 1988, the mass media reported his achievement as “the Human Victory against Hepatitis” (*Kanyŏm igigo in’gan sŭngni*).¹⁸

Among such athletes, the most famous was probably Yang Yŏngja, one of the most influential table tennis players in Korea. Since 1980, she led the Korean national team in numerous matches and tournaments across the world. Presumably, the mass media reported, she worked too hard, when she fell ill with hepatitis in 1984. In the previous years, she had to frequent to her clinic with “her left arm hooked up with an injection needle and the right hand holding her racket” (Kim Minsuk 1988). Yet she now had to be hospitalized at a critical moment when the national team was about to meet North Korean players during a key international competition at Stockholm. Nonetheless, she successfully overcame her trouble and returned to

¹⁷ Yi Kyesŏn, interview, March 7, 2019.

¹⁸ “Kanyŏm igigo in’gan sŭngni,” *Tonga ilbo* (September 23, 1988).

the green table during the Asian Games at Seoul, where she won a gold medal with Hyŏn Chŏnghwa and other junior colleagues in the team. Unfortunately, Yang fell again, when her condition worsened during the Asian Championship in China in the same year. When she appeared again in a later Korean match along with Yi Kyesŏn, an inspired observer hailed that they were the “phoenix sisters rising from hepatitis.”¹⁹ Yang subsequently joined the national team in the Seoul Olympic Games with Hyŏn, and the two secured the gold medal in the doubles.

In achieving this success, hepatitis was not just a problem that demanded a control, but also an agency rendering the nationalistic meaning of the achievement even stronger. Probably, the Chun administration never intended this cultural appropriation, because it wanted healthy and strong bodies exhibited in the state-sponsored sports events. Therefore, biomedicine persistently intervened to eliminate those unfit bodies from the arena of nationalistic endeavor, as they were shameful and dangerous to the rest of the team. However, Yang’s sick body elicited an unanticipated change. In effect, a Korean novelist claimed that Yang scored a “beautiful victory” that must be “recorded in history” (Kim Minsuk 1988). Her performance was so great, because of her past hardship that she had to endure. According to the novelist, Yang had once considered retirement, when she was hospitalized. If she had actually chosen to retire at the time, however, she “probably could not be remembered even as a mediocre player.” Another commentator also said that Yang could have been just a “good player” if she had not experienced her past adversity (Ch’oe Hwagyŏng 1989). She now became an “extraordinary,” rather than “good,” player, precisely because she came back to her profession with the illness that had no cure. Hepatitis, which stayed within her liver throughout her painful years, made her contribution to the nation even more outstanding.

Conclusion

This paper has argued against the conventional view that sick bodies infected with hepatitis were just objects of biomedicine, which was thought to be a central factor in Korea’s

¹⁹ “Yang Yŏngja Yi Kyesŏn - kanyŏm sŏ irŏnan pulssajo chamae,” *Tonga ilbo* (December 26, 1986).

nation-building. I have explored the conflicting cultural meanings of hepatitis B in Korea, where the disease and Korean bodies played multiple roles in shaping the biomedical and nationalistic discourses and practices in the 1970s and 1980s. In particular, HBV in the Korean serum was useful in producing Hepavax B, whose testing also relied on the prevalence of hepatitis in Korean society. If Koreans had to be proud of their successful vaccine manufacturing, it was partly because of their poor and perhaps pitiful health conditions due to what Americans regarded as a stigmatizing disease. The cultural concern on Korean bodies in front of foreigners was also a major factor that sustained the movement against *suljan tolligi*, a form of biomedical intervention into everyday life in the country. Furthermore, hepatitis was a factor that made the great performance of some Korean players look even greater, although biomedicine under the Chun regime was persistently trying to remove unfit bodies in preparation for the two major sporting events that would be held against the North Korean machination in the final years of the Cold War.

All these instances explain why hepatitis B was so important in South Korea. The anti-hepatitis movement was closely affiliated with Koreans' imaginaries of their desired nationhood, expressed in their rising bioindustry, high-level hygiene, and impressive athletic performance of healthy bodies in international sporting arenas. Interestingly, their nationhood was also found in their opposites, including impoverished blood sellers carrying HBV, *suljan tolligi*, and sick star players infected with hepatitis. In this sense, it was hard for any Koreans to say that hepatitis B was a disease only for the indigent, underprivileged, and marginalized. There was little scientific and cultural support for this view. Furthermore, hepatitis was considered a disease of men rather than women, as it was associated with their active social life, a central factor in the productivity of the country that actively pursued its industrial growth. To some physicians, it was also an illness representing their nation's considerable progress in healthcare, as it emerged with their improved public health in the late twentieth century.

Under these circumstances, the military dictatorship that steered the state came to assume an ambiguous relationship with hepatitis. Its persistent efforts to accomplish its aims, including the promotion of science and industry, control of diseases, and support for athletic supremacy, resulted in contradictory consequences. Ironically, a significant factor making possible the

state's success in producing and exporting anti-hepatitis vaccines was its failure in controlling HBV, which forged another irony that infected serum guaranteed the vaccines' efficacy and safety in the country. Likewise, the state's endeavor to enlighten the public through the movement against *suljan tolligi* was found to have little scientific basis, although the movement itself continued with different targets. Moreover, the Korean state, which desperately tried to control hepatitis in the national team by removing sick players, found that some of its most successful athletes were hepatitis patients, whose achievement looked even greater precisely due to their diseased livers.

What, then, happened after the end of the military dictatorship? Even after Korea became a democratic country with the June 29 Declaration in 1987, the government still did not enforce the compulsory neonatal vaccination funded by the state. But hepatitis screening took place more often with the coming of democracy, as general elections sometimes came with free liver checkup sessions as a means of winning the hearts of voters (T'ŭkpyŏl ch'wijaeban 1988). Korean pharmaceutical companies also began to produce and sell vaccines manufactured through genetic engineering, as predicted by Kim Chung Yong. To him, a successful anti-hepatitis campaign would ultimately weaken the competitiveness of Korean vaccines with a long-term depletion of the "natural resource," which would then necessitate the use of a new technology (Kim Chung Yong 1984b, 270). To be sure, the proportion of HBsAg carriers in the country considerably decreased with the enactment of the national neonatal vaccination program in 1995 (Han et al 2011, 125). Meanwhile, Hyŏn Chŏnghwa, after Yang's retirement, teamed up with Ri Punhŭi, a North Korean player, in a world table tennis championship in Japan (Ch'oe Yongwŏn 1991). To some, this signaled a temporary yet substantial relaxation of the tension in the peninsula at the end of the Cold War. To others, what was more important was the fact that Ri turned out to be a hepatitis patient, but none in the South Korean team suffered from it. Hepatitis B would no longer be a significant problem in the southern half of the peninsula.

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