

Science and Ideology: The Rise and Fall of the *Bonghan* Theory in North Korea in the 1960s*

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1. Introduction

In the 1960s, North Korea presented as its greatest scientific achievement the *Bonghan* theory (鳳漢學說), which it considered to elucidate the reality of *gyeong-nak* 經絡 (meridians) through research on traditional East Asian medicine (TEAM) and Western medicine. This theory was expected to be amply capable of being acknowledged for its uniqueness and excellence both at home and worldwide. North Korea named the theory after the scientist who had conducted the research, which probably remains the only case in both Koreas with the exception of biological taxonomy. Indeed, this theory was so lauded that even Ri Seunggi 李升基, who was famed in North Korea in the era as a Hero of Science for his discovery of the synthetic fiber vinylon (called “vinalon” in North Korea), was overwhelmed by its authority and influence and could not come forth for some time.

However, the rise and fall of the *Bonghan* theory was oddly abrupt, and occurred over a considerably brief period. Amidst considerable excitement, the importance of this theory was presented and led competitively by politically powerful figures and policy makers who had been scientists in the past. With the active use of the word *Juche* 主體 (self-reliance) in scientific circles at this time, the theory opportunely served as a basis for technocrats who were growing politically. The more groundbreaking scientific theories are, the more carefully they are handled in most cases, and academic discussions surrounding them tend to be more meticulous as well. In contrast, this particular theory was not treated in such a way.

These facts demonstrate that the *Bonghan* theory did not remain on the level solely of academic research in scientific circles. On the contrary, this theory seems to have had a complex interrelationship between science and political ideology, dramatically emerging and falling over a brief period in the end. In particular, with the rise of a new social ideology based on a self-reliant line in North Korea, this was a period in

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which related factors outside science had an immense effect on the field. While exhibiting unification with the nation's social system, the theory developed in such a way that excellence in science equaled the superiority of the system and vice versa.

This paper will first examine how TEAM¹ acquired importance in a social system that aimed at scientific socialism (科學的社會主義), which seemingly did not accord with the discipline. It is also necessary to reexamine why Kim Bonghan 金鳳漢 (1916-?), the pioneer of this research, led the scientification of TEAM, unlike and above others, even though he was a researcher of Western medicine. The paper will carefully consider the social context in which, amid such circumstances, the *Bonghan* theory suddenly came to be acknowledged as a pioneering scientific achievement and examples where the theory, conversely, was used as a new scientific ground strengthening the social system that legitimized it. Finally, the conclusion will briefly examine how although this *Bonghan* theory expired not much later as science yet its ideological avatar continued to exist and to function. In addition, it must be clarified in advance that such a study will focus on aspects external to science rather than on internal ones.

2. The Rise of TEAM

For a considerable time following the liberation from Japanese colonial rule (1910-1945), TEAM barely managed to survive in North Korea, failing to attract any attention in particular. Just how indifferent North Korea was to the discipline becomes immediately clear when a comparison is made with the situation in South Korea at the time. Despite strong opposition from Western medical circles, South Korea acknowledged TEAM's therapeutic effects and contributions to the public, thus permitting the establishment of TEAM colleges (漢醫科大學) and institutionalizing TEAM physician (漢醫師) licenses.² On the contrary, North Korea did not take any

¹ Unlike "han uihak" 韓醫學 ([traditional] Korean medicine) in South Korea, North Korea currently calls TEAM, especially traditional Korean medicine (TKM), "goryeo uihak" 高麗醫學 ([traditional] Goryeo [Korean] medicine). However, the name for the field has been changed on several occasions according to shifts in the circumstances. At first, the discipline was termed "han uihak" 漢醫學 ([Han] Chinese medicine), used traditionally, or "dongbang uihak" 東方醫學 (Oriental medicine), used in socialist China in the early years. Starting in the 1960s, however, it was called "dong uihak" 東醫學 (Eastern medicine) for a considerable time as medicine unique to the Korean Peninsula (deriving from ancient names of the nation, *Dongguk* 東國 (Eastern Country), and *Haedong* 海東 ([Country] East of the [Yellow] Sea) and distinguished from that of China. Just as the discipline is called "*Zhong yixue*" 中醫學 ([traditional] Chinese medicine) in China and "*Kōkan igaku*" 皇漢醫學 (Imperial [i. e., Japanese]-[Han] Chinese medicine) or "*Wakan igaku*" 和漢醫學 (Japano-[Han] Chinese medicine) in Japan, respectively, the nomenclature has come to differ according to the country.

² The process through which TEAM came to be established in South Korea at the time is mentioned in comparative detail in the *Daehan hanuisa hyeophoe* 大韓韓醫師協會 (Association of Korean

noteworthy measure.

This is because, in contemporary North Korea, which stressed the scientific above all, TEAM failed to be acknowledged as a field in the natural sciences. TEAM was seen as a “vague” and “mysterious” theoretical system that could not be explained or understood through Western medical knowledge, which was considered the heart of medical science. In the end, for North Korea, which aimed at a “modern” and “scientific” Soviet-style socialist system, TEAM was difficult to accept due to its “premodern” and “feudal” nature. In other words, though it may have had high therapeutic effects, the discipline could not possibly fit the image of the North Korean system due to its unscientific nature.

However, the situation changed abruptly, with the 3rd Congress of the Workers’ Party of Korea (hereafter, WPK, 朝鮮勞動黨) held in April 1956 as the impetus. In the final project report of the Party’s Central Committee (中央委員會), the then Prime Minister Kim Il-sung 金日成 stressed, “[Han] Chinese medicine [漢醫學], which our [the Korean] people have used over a long period and become accustomed to, must be researched and analyzed in depth, and its excellence must be consumed for introduction into public health projects.” This was well supported also by the subsequently presented fact that “one of the tasks importantly raised before workers in the sciences, especially workers in the social sciences, is the project of constructing the foundation for the future development of an illustrious and sound science culture by inheriting outstanding heritage from the past science and culture of our country along with research projects in advanced science and collecting and summarizing all scientific research data.”³

As a detailed measure to be implemented, Cabinet Order (內閣命令) No. 37, “On Developing [Han] Chinese Medicine and Improving and Strengthening [Han] Chinese Medical Treatment Projects (漢醫學를 發展시키며 漢方治療事業을 改善強化할 데 關하여),” was taken immediately. The main contents were that, first, the Oriental Medicine Laboratory (東方醫學研究室) was to be established in the Institute of Medicine (醫學研究所) of the Academy of Sciences (科學院) in order to strengthen and theoretically systematize research projects. Second, the Department of [Han] Chinese Medical Treatment (漢方治療科) was to be widely established in major preventive treatment institutions and to prompt TEAM physicians’ active participation. Third, TEAM physicians were to be organized as much as possible, and general [Han] Chinese medical clinics (漢醫綜合診療所) were to be created widely. Fourth, crude (i. e., herbal) drug resources were to be searched for actively, and the

Medicine), *Daehan hanuisa hyeophoe sasipnyeonsa* 大韓韓醫師協會 四十年史 (The 40-year History of the Association of Korean Medicine) (Seoul: Association of Korean Medicine, 1989).

³ Kim Il-sung, “Joseon rodongdang je samcha daehoe’eseo jinsulhan jungang uiwonhoe saeop chonggyeolbogo” 朝鮮勞動黨 第三次大會에서 陳述한 中央委員會 事業總結報告 (The Central Committee’s Final Project Report Explained at the 3rd Congress of the Workers’ Party of Korea), *Geulloja* 勤勞者 (Workers) (May 1956), 52, 86.

project for collecting and procuring them was to be expanded and strengthened. Fifth, state-operated dried medicinal herb dispensaries (國營乾材藥局) were to be installed in order to provide the people with more traditional East Asian medication at affordable prices, and the project for exporting diverse crude drugs was to be strengthened.⁴

From this time onward, TEAM became an important part of state public health projects and newly rose in status:

...[Han] Chinese medicine of the East is the traditional medicine of Korea. The problem of [Han] Chinese physicians is not raised again only today, when there is a dearth of medical workers. The real task facing us, of developing national medicine in our country, demands it. In [Han] Chinese medicine, the traditional experiences of *hanuisul* 漢醫術 ([Han] Chinese medical techniques) have been generalized, and there are valuable experiences with using crude drugs in every way in consideration of Korea's climate and natural characteristics and the people's constitutions and living conditions.

Consequently, the task facing public health workers today is: to introduce and support them into projects for the people's health; and to research and analyze and to systemize scientifically various issues in the medical technology achieved as a product of our forefathers' valuable experiences over a long time, thus inheriting and developing outstanding traditions in medical heritage into a new stage.⁵

Regarding such a dramatic improvement in the status of TEAM, Northern Korea's increasingly active exchange with and influence from China can be pointed out. China opportunely had been making diverse efforts to establish and to develop traditional Chinese medicine (TCM; 中醫學) since the mid-1950s, ahead of North Korea. Representative examples were: the establishment of the China Academy of Traditional Chinese Medicine (CATCM; 中國中醫研究院; present-day China Academy of Chinese Medical Sciences; CACMS 中國中醫科學院); the installation of the Department of Traditional Chinese Medicine (中醫科) and the Department of Acupuncture and Moxibustion (鍼灸科) in Western hospitals; the founding of combined TCM[-Western] medical institutions (中[西]醫聯合醫療機關); and the organization of TCM research groups and study groups for Western physicians (西

⁴ Ju Hongjae 주홍재, "Hanuihak baljeoneul wihan myeotgaji munje" 漢醫學發展을 위한 몇가지 문제 (Several Issues for the Development of [Han] Chinese Medicine), *Inmin bogeon* 人民保健 (The People's Health) (Jul. 1957), 9. At this point, TEAM physicians in private practice were not yet repudiated and even received partial support as well.

⁵ Ri Byeongnam 李炳南, "Inmin bogeo nsaeopui gaeseon ganghwareul wihan dangmyeon gwaep" 人民保健事業의 改善強化를 위한 當面課業 (Current Tasks for the Improvement and Strengthening of Public Health Projects for the People), *Inmin* 人民 (The People) (Nov. 1956), 67.

醫).⁶ Accordingly, North Korea dispatched to China short-term trainees and, later, long-term students who would be learning that country's TCM and policies. In other words, it sought quickly to learn as much as possible from its neighboring nation's advanced TCM. Consequently, many of the early TEAM and TEAM physician policies implemented by these North Korean figures in leadership positions after their return tended to follow Chinese models.

Next was the effect of the self-reliant and independent line that the North Korean regime raised out of a need to establish its identity firmly in the face of both the Sino-Soviet split and the emergence of opposing factions. At the time, North Korea presented its own historical experiences and the need to build society in full consideration of the conditions of its social reality rather than unilateral and unconditional adherence to other socialist countries. In this process, the issue of appropriately inheriting and developing cultural heritage unique to the Korean people was important. Because Korean history, too, possessed outstanding cultural heritage including astronomy, meteorology, printing, medicine, and architectural technology, efforts should be made to research and to consume that tradition critically, with ethnonational pride.⁷ As a part of such efforts, medical circles came to pay renewed attention to TEAM.

Subsequently, TEAM physicians were expected to play certain roles in mitigating the current problem of insufficient medical specialists. With the full-fledged implementation of the free treatment system, the demand for medical services had increased explosively and unbearably. Although the training of medical specialists hitherto had in fact increased noticeably, the supply of those specialists had become worse than in the past instead, with respect to society's demand for specialists. In the end, it was necessary to seek diverse ways to make use of idle medical specialists, and TEAM physicians constituted the only remaining and main group that could be taken into consideration importantly.⁸ Moreover, a measure was taken even to expand fully free treatments with TEAM and traditional East Asian medication, partly implemented since the end of 1958, starting in the following year. Consequently, it

⁶ As for China's overall policies on TCM, see Ma Boying 馬伯英, et al., *Zhongwai yixue wenhua jialiu shi—Zhongwai yixue kua wenxue chuantong* 中外醫學文化交流史—中外醫學跨文化傳通 (Shanghai: Wenhui chubanshe, 1993), translated into Korean as: trans. Jeong Uyeol, *Jungwoe uihak munhwa gyoryu sa* 中外醫學文化交流史 (Seoul: Jeonpa gwahaksa, 1997), 654-662. As for the details, see Kim Hyoseon 김효선, "Junggukeseoui jungui (hanui) jeongchaekgwa geu-ui seonggwā" 中國에서의 中醫(漢醫)政策과 그의 成果 (Chinese Medicine ([Han] Chinese Medicine) Policies in China and Their Achievements), *Inmin bogeon* (Dec. 1957), 14-18; "Hanuihakeun widaehan bomulgo ida" 漢醫學은 偉대한 寶物庫이다 ([Han] Chinese Medicine Is a Great Treasure Trove), *Inmin bogeon* (Apr. 1960), 42-45.

⁷ Ha Angcheon 河仰天, "Gwahak munhwa yusanui gyeseung baljeoneul wihan myeotgaji munje" 科學文化遺産의 繼承發展을 爲한 몇가지 問題 (Several Issues for the Inheritance and Development of Scientific Cultural Heritage), *Geulloja* (Jul. 1956), 23-33.

⁸ In Pyeongyang alone, the number of TEAM physicians who could be drawn into medical institutions amounted to 100. Ri Byeongnam, "Inmin bogeon saeopui" (cit. n. 5), 66.

was expected that TEAM physicians would play important roles, above all, in rural communities and mountain villages, where medical specialists were in great demand.

Finally, with the passage of time, TEAM could be used as an indirect means of importantly highlighting and legitimating the revolutionary heritage of those in charge of the regime. During the anti-Japanese armed struggles, “*bbalchisan* 빨치산 (guerilla) comrades [had] inherited and developed [Han] Chinese medicine by treating guerilla comrades’ wounds and diseases and treating the people’s diseases with [Han] Chinese medicine.”⁹ TEAM was thus used to buttress, albeit modestly, the legitimacy of Kim Il-sung’s armed forces that had struggled against Japanese imperialists.

The North Korean authorities therefore actively engaged in activities to change the social climate, which hitherto had denigrated TEAM. From this time onward, an attitude that condemned or disdained the discipline came to be seen as stemming from a “bourgeois ideology” that chose not to acknowledge the value of the Korean people’s creative experiences and achievements. In particular, it was claimed that vestiges of Japanese imperialism, which had sought to annihilate TEAM, were still deep-rooted in certain quarters. In addition, it was important not to swerve from the “materialist stance” that, without developing and striving based on the accumulation of the forefathers’ transmitted experiences, contemporary medical science would not have been able to yield current results. Consequently, the argument ran, it would be necessary to have an accurate perception of the value of TEAM itself instead of rejecting the field as something unscientific.¹⁰

As a result, TEAM came to be revaluated as clearly possessing both cultural value as a national culture and value as medical science. The first reason was that the discipline implied, to a considerable extent, “plebeianism [人民性] and its historical contributions.” The discipline was seen as the “[people’s] medicine, with a long history of originating from the people, being formed in the hands of the people, and faithfully serving the people.” Second, it was claimed, TEAM theories adopted the

⁹ Kim Hyoseon, “Haebanghu sibonyeongan hanuihakeul gyeseung baljeon sikineun saeopeseo geodun seonggwā” 解放後 十五年間 漢醫學을 繼承發展시키는 事業에서 거둔 成果 (The Fruits Reaped in Projects to Inherit and Develop [Han] Chinese Medicine over 15 Years since the Liberation), *Joseon uihak* 朝鮮醫學 (Korean Medicine) (Oct. 1960), 11. Besides such facts, North Korean materials published later, including Hong Sun-won 홍순원, *Joseon bogeonsa* 朝鮮保健史 (The History of Public Health in Korea) (Pyeongyang: Korea Science and Encyclopedia Publishing House, 1981), often mention that Kim Il-sung’s father Kim Hyeongjik 金亨稷 took part in the anti-Japanese independence movement while operating a *hanuiwon* 漢醫院 ([Han] Chinese medical clinic) in Manchuria. For reference, it is said that he briefly studied at *Severance yeonhap uihakgyo* 聯合醫學校 (Union Medical College) in the mid-1910s and that testimonial materials on this are housed in the Department of Medical History in the College of Medicine at Yonsei University.

¹⁰ Kim Hyoseon, “Hanuihake daehan seouiga bon gwanjeom” 漢醫學에 對한 西醫가 본 觀點 ([Han] Chinese Medicine as Seen from the Perspective of a Western Physician), *Inminbogeon* (Feb. 1957), 25–26.

“perspective of the materialist dialectic, however modestly.” All things were perceived not only as existing in conflicts among contradictory forces but also as a unity interconnected and influencing one another. Third, TEAM possessed “outstanding experiences in treatments” and innumerable materials that would enrich the contents of contemporary medicine. Of course, it was acknowledged that the field was not without unscientific and mystic aspects. Nevertheless, the argument ran, though TEAM admittedly was *gyeongheom uihak* 經驗醫學 (empirical medicine) not systematized through contemporary scientific theories, it not only boasted many outstanding cases in treatments but also could resolve several areas unresolved by contemporary medicine.¹¹

North Korea’s advocacy of TEAM was related to changes in its judgment on and attitude toward the sciences. With the downfall of the absoluteness of universality (internationality) and theoretics (logicality), hitherto considered to be the general characteristics of the sciences, the new values of plebeianism (locality) and praxis (empiricism) came to be highlighted as important. Now, terms such as “people’s science” (*inmin gwahak* 人民科學) and “empirical science” (*gyeongheom gwahak* 經驗科學) come to be commonly used even in the sciences. In a way, this was also a demonstration of North Korea’s establishment of a new socialist line under the influence of not only the Soviet but also the Chinese socialist system.

3. The Conflict between TEAM Physicians and Western Physicians

Contrary to expectations, TEAM failed to establish itself smoothly. It was because opposition from diverse quarters was quite fierce notwithstanding the ruling elite’s strong drive. Such a backlash stemmed from a concern about the vested interests and stability of medicine overall and an aversion to drastic changes. This reaction was true of not only Western physicians but also TEAM physicians.

While the institutionalization of TEAM in North Korea¹² was an occasion for officially acknowledging the existence and activities of TEAM physicians, it also served to transform completely these figures’ social position and ideologies. In other words, TEAM physicians were now demanded to devote themselves to the promotion of the people’s health at the expense of personal gain and to realize collectivization and cooperativization in order to systematically guarantee public health. Indoctrination (*gyoyang* 教養) projects seeking to raise these physicians’ theoretical

¹¹ Ibid., 23-25.

¹² Major facts related to the institutionalization of TEAM in North Korea are well recounted in Sin Jaeyong 申載鏞, ed., *Bukhan hanuihak* 北韓漢醫學 ([Han] Chinese Medicine in North Korea) (Seoul: Donghwa munhwasa, 1992), 58-69, which in turn is a summary of the contents of *Donguihak sajeon* 東醫學辭典 (A Dictionary of Eastern Medicine) (Pyeongyang: Korea Science and Encyclopedia Publishing House, 1988).

levels in political ideology were strengthened considerably, and general [Han] Chinese medical clinics, which were state-owned cooperative organizations, were installed *en masse* for the realization of socialist medical management. These general [Han] Chinese medical clinics were expanded in number from 103 in 1957 to 182 in June 1960, thus establishing themselves as one form of leading socialist TEAM institutions.¹³ In other words, the project of reforming TEAM physicians socialistically finally came to be implemented amidst the pursuit of the institutionalization of TEAM around this time, in step with other fields.

However, most TEAM physicians were in their sixties and seventies, and lacked systematic education. They experienced difficulty in fully understanding the WPK's policies and, even when otherwise, did not actively learn about or follow such policies. These figures, hitherto active as private practitioners, were accustomed to keeping their own secret formulas (*bibang* 秘方) and pursuing largely personal profit. Among them were numerous schools, which led to accumulated distrust and factionalism, thus making integration difficult. Nor would the number of those who deceived patients by resorting, at times, to preposterous "treatments" and superstitious acts have been small.¹⁴ For these reasons, attempts to establish TEAM in a particular manner were bound to encounter challenges that were greater than expected.

The early TEAM policies were led by Western physicians. Short-term trainees and long-term students dispatched to China at the time have been shown to have been mostly specialists in Western medicine.¹⁵ It was because TEAM physicians had not properly received formal education and therefore lacked the ability to ideologize and to institutionalize TEAM according to the new social system. In fact, these figures were deficient in many ways even in establishing and explaining theoretical systems for their own discipline, even if they were adept at experience-based clinical treatments. As a result, Kim Hyoseon,¹⁶ a Western physician, came to be appointed to the highest position overseeing TEAM policies.

However, there were considerable differences between TEAM physicians and Western physicians on the vision of the development of TEAM. First, as is apparent

¹³ Ju Hongjae, "Hanuihak baljeoneul" (cit. n. 4), 9-10; and Kim Hyoseon, "Haebanghu" (cit. n. 9), 12. As for preventive treatment institutions, the Department of Eastern Medicine was expanded into *Inmin byeongwon* 人民病院 (people's hospitals) in all cities (市) and counties (郡), in number from ten in 1956 to 332 in 1960.

¹⁴ Kim Hyoseon, "Hanuihak baljeon eseuoi saeroun jeonjineul wihayeo" 漢醫學發展에서의 새로운 前進을 위하여 (For New Progresses in the Development of [Han] Chinese Medicine), *Inmin bogeon* (Apr. 1959), 19-20.

¹⁵ Not only figures dispatched to China as short-term trainees with known career history but also those who were subsequently sent as long-term students mostly seem to have been Western physicians originally. "Guknae bogeon sosik" 國內保健消息 (Domestic Public Health News), *Inmin bogeon* (Dec. 1960), 48.

¹⁶ A specialist in Western medicine, he served as the Vice Bureau Chief (*bu gukjang* 副局長) of the Medical Bureau (*Uimuguk* 醫務局) in the Ministry of Public Health (*bogeonseong* 保健省) after a sojourn in China as a short-term trainee.

from the nomenclature, TEAM physicians expressed pride in their field, calling it “Oriental medicine” (東方醫學) on par with “Western medicine” (西[洋]醫學) and, later, “Eastern [i. e., Korean] medicine” (東醫學) on an equal footing with “[traditional] Chinese medicine” (中醫學).¹⁷ On the contrary, Western physicians understood “new medicine” (新醫學) and “[Han] Chinese medicine” (漢醫學), terms used in China, as disparate and adopted them as contrasting terms. Whereas TEAM physicians presented the particularity of TEAM and argued for the independence of its system, Western physicians placed TEAM below Western medicine as a subcategory and sought to create a hierarchy between the two. From the perspective of Western physicians, TEAM was a kind of a backward discipline, still unequipped with a scientific system, still waiting to be understood and explained through advanced contemporary medicine. For these reasons, Western physicians’ contempt for and discrimination against TEAM continued to be strong.

In fact, as noted by the North Korean authorities, TEAM in China at the time was growing dramatically amidst deep interest and being equipped with its own theories and organizational structure. As specific examples: the CATCM (中國中醫研究院) and the Institute of Chinese Materia Medica, which studied TCM and traditional Chinese pharmacy, were independent; TCM institutions established themselves in the basic forms of TCM hospitals and general [Han] Chinese medical clinics; and TCM specialists, too, were trained at independent educational institutions.¹⁸ Moreover, even the term “new medicine,” frequently used by Western physicians in North

¹⁷ It is apparent from Jo Heonyeong 趙憲泳, “Dongbang uihakui jungyoseonggwa geu baljeon jeonmange daehayeo” 東方醫學의 重要性과 그 發展展望에 對하여 (On the Importance and Development Prospects of Oriental Medicine), *Joseon minjujuui inmin gonghwaguk gwahakwon tongbo* 朝鮮民主主義人民共和國 科學院 通報 (Bulletins of the Academy of Sciences of the Democratic People’s Republic of Korea; hereafter *Bulletins of the Academy of Sciences*) 3 (1957), 21–25 that Jo Heon-yeong, a representative figure in TEAM in North Korea at the time, presented the field as an academic discipline with a system independent from that of Western medicine. Born in 1900 in Yeong’yang 英陽 County, North Gyeongsang Province, he was an intellectual with nationalistic consciousness who had graduated from the Department of English at Waseda University in Japan. He had served as the executive secretary (總務幹事) of *Sin’ganhoe* 新幹會 (the New Trunk Society), a nationalistic activist organization, and, following the dissolution of this group, led the TEAM revival movement in the 1930s by penning the *Tongsok hanuihak woll-ron* 通俗漢醫學原論 (Principles of Popular [Han] Chinese Medicine). Since then, he has become well-known also as the poet Jo Jihun’s 趙芝薰 father. Yi Jonghyeong 李鍾馨, “Han’guk donguihaksa” 韓國東醫學史 (The History of Eastern Medicine in Korea), in Korea University Research Institute of Korean Studies (高麗大學校 民族文化研究所) ed., *Han’guk hyeondae munhwasa daegyae* 韓國現代文化史大系 (A Compendium of the Contemporary Cultural History of Korea) (Seoul: Korea University Research Institute of Korean Studies, 1977), 312.

¹⁸ Ryu Gichun 柳基春, “Jungghwa inmin gonghwagukui bogeon” 中華人民共和國의 保健 (Public Health in the People’s Republic of China), *Inmin bogeon* (Aug. 1957), 62; Kim Hyoseon, “Junggukeseoui jungui gaehyeokgwa” (cit. n. 6), 16; and Ri Deokjeon 리덕전, “Sae Jungguk bogeon wisaeng saeopui sipnyeon” 새 中國 保健衛生事業의 十年 (Ten Years of the New China’s Public Health and Hygiene Projects), *Inmin bogeon* (Oct. 1959), 7.

Korea, had originally referred not to Western medicine alone but to a new, integrated medical system combining TCM and Western medicine in China. Nevertheless, in North Korea, this was quite intentionally understood as Western medicine. Of course, even in China, the terms “new medicine” and “old medicine” (舊醫學) occasionally were used to refer to Western medicine and TCM, respectively. However, they signified “newly introduced medicine” and “medicine with a long tradition,” respectively.¹⁹ This differed considerably from the fact that, in North Korea, “new medicine” and “[Han] Chinese medicine” were understood as “new [i. e., advanced] medicine” and “old [i. e., outdated] medicine,” respectively. While China perceived the two fields as different in form, North Korea sought to view them as different in level, with one superior to the other.

In its early years, North Korea thus strove to modify and implement the TEAM policies of China from the perspective of Western physicians:

There are not a few aspects of [Han] Chinese medicine that have not yet been pioneered scientifically by contemporary medicine. Aspects that contemporary medicine today finds difficult or impossible to resolve can very well be resolved by occupying still unconquered strongholds of [Han] Chinese medicine. New physicians must stand at the forefront of this struggle without fail, and [Han] Chinese physicians must be active collaborators in it... In principle, medicine in our country is based on new medicine, and [Han] Chinese medicine is demanded in order to enrich the contents of new medicine, thus further developing its theory. If we fail to do so and, citing only the “particularity” of [Han] Chinese medicine, deny new medicine’s approach to [Han] Chinese medicine, we will not only impede the development of medicine in our country but also decisively impede the development of [Han] Chinese medicine itself.²⁰

In other words, it is clear that North Korean policies sought to subsume TEAM under Western medicine and to reconstruct it through the theories and methodologies of Western medicine, at the initiative mainly of Western physicians.

When major policy measures regarding TEAM are examined, energy was devoted to establishing the laboratory of [Han] Chinese medicine under the Institute of Medicine and the departments of [Han] Chinese medicine and the departments of acupuncture and moxibustion in major hospitals, respectively, no smaller than that of general [Han] Chinese medical clinics. For several years, efforts were directed at reeducating existing TEAM physicians and, more importantly, prompting Western physicians to learn TEAM rather than at fostering new TEAM specialists. For example, starting in 1958, TEAM lectures for prospective Western physicians were created at universities, and existing Western physicians were encouraged to organize

¹⁹ Ma Boying, et al., trans. Jeong Uyeol, *Jungwoe uihak munhwa gyoryu sa* (cit. n. 6), 654-662.

²⁰ Kim Hyoseon, “Hanuihak baljeoneseoui” (cit. n. 14), 22.

TEAM study groups.²¹ Of course, Western physicians assiduously studied TCM in China, too, but this was not part of a struggle to seize hegemony.

Nevertheless, a tendency to disdain TEAM still remained strong among Western physicians in North Korea. The greatest reason was that TEAM was non-science, unproven through contemporary scientific and experimental analyses and, in the end, devoid of scientific grounds. Although the fact that TEAM had some clinical effects itself was not denied, this was seen only as stemming from the accumulation of experiences. As a result, even many Western physicians in leadership positions, too, were critical. “As for [Han] Chinese medicine, it is only that [Han] Chinese medication (*hanyak* 漢藥) has been effective from the olden days, whereas [Han] Chinese medicine itself is empirical medicine, metaphysics, or whatever.”²² Admittedly, such perception was widespread among specialists in the sciences, including medicine, since its formation, during the Japanese colonial era. TEAM policies were adrift, failing to reap visible fruits and only leaving room for conflict.

Subsequently, the institutional establishment of TEAM came to be realized as the North Korean authorities suppressed the conflict and discord between Western physicians and TEAM physicians with the ideological struggle that happened to sweep across the nation and forced both parties to get involved actively. The conduct of existing TEAM physicians was rebuked as sectarian and petit bourgeois. At the same time, the attitude of Western physicians, too, was criticized as a remnant of Japanese colonialism originating from bourgeois thought. Specifically, “a nihilistic attitude toward [Han] Chinese medicine, which is among our [i. e., the Korean] people’s outstanding cultural heritage,” “the dogmatic attitude that only others’ [i. e., foreign] things are good,” and “a vicious ideological vestige within medicine left by Japanese imperialists” rightly had to be cleared.²³ The North Korean government sought to block individual opinions or dissatisfaction thoroughly and to establish a new integrative order in medical circles.

North Korea literally made use of dialectics with respect to the relationship between TEAM and Western medicine, pursuing the integration of the two fields while acknowledging their independence. With the arrival of 1959, both the re-registration

²¹ Kim Hyoseon, “Haebanghu” (cit. n. 9), 12-13.

²² “Hakgye sosik” 學界消息 (Academia News), *Joseon uihak* 7:4 (1960), 52; Ri Jinhong 리진홍, “Pyongyang-si Hanui jonghap uiwon wonjang Ri Jinhong dongmuui toron (yoji)” 平壤市 漢醫綜合醫院 院長 리진홍 동무의 討論(要旨) (The Discussion of Comrade Ri Jinhong, Director of Pyongyang [Han] Chinese Medicine General Hospital [Summary]), *Inmin bogeon* (The People’s Health) (May 1959), 36; Hong Hakgeun 洪學根, “Uihak gwahak ilgundeul sokeseo jabonjuui sasang janjaereul cheongsanhago yeongu saeopesseo jileul jegohal de daehayeo 醫學科學일군들 속에서 資本主義 思想 殘滓를 清算하고 研究事業에서 質을 提高할 데 對하여 (On Clearing Vestiges of the Capitalist Ideology among Medical Science Workers and Elevating the Quality of Research Projects), *Joseon uihak* 6:5 (1959), 12-13.

²³ “Hakgye sosik” (Academia News), *Joseon uihak* 7:4 (1960), 52.

of inactive TEAM physicians and the qualification screening of those who had failed to receive licenses were implemented, thereby further increasing the number of TEAM physicians.²⁴ In the following year, the Department of [Han] Chinese Medicine (漢醫學科) was established at Pyeongyang Medical College (平壤醫學大學) as an independent department with an entrance quota of 120, thus making possible the emergence of new, systematically educated TEAM physicians, as TEAM circles had long wished for.²⁵ There arose groups of Western physicians who voluntarily learned TEAM, and TEAM physicians, in turn, came not only to be reeducated in their own discipline but also to learn Western medicine to a certain extent. Finally, also pursued were projects in which TEAM physicians and Western physicians jointly participated in research conducted under single research topics. North Korea thus came to seek for a new form of “organic unification and collaboration” of Western medicine and TEAM as the direction of the future development of medicine.

As the 1960s dawned, TEAM had an occasion to be further encouraged amidst a social climate that stressed self-reliance. For example, for the first time, events socially promoting the importance of the field were successively held. In 1960, the First National [Han] Chinese Medical Experience Exchange Conference (全國漢醫學經驗交換會) was held successfully, attended by over 300 figures from various areas.²⁶ At the end of that year, a massive event to commemorate the 350th anniversary of Heo Jun’s 許浚 authorship of *Dongui bogam* 東醫寶鑑 (Treasured Collections of Eastern Medicine, 1613) was held, attended by a large number of figures from medical circles.²⁷ In 1961, many TEAM texts, including *Dongui bogam* 1-5, were either translated into Korean or newly penned and published in earnest.²⁸ In addition, an event commemorating the 60th anniversary of Yi Jema’s 李濟馬 composition of *Dongui suse bowon* 東醫壽世保元 (Longevity and Life Preservation in

²⁴ “Hanui gisul ilgundeului jae deungrok mit jagyeok simsa yogang” 漢醫技術員군들의 再登錄 및 資格審査要綱 (Requirements for the Re-registration and Qualification Screening of [Han] Chinese Medical Technology Workers), *Inmin bogeon* (Jul. 1959), 66.

²⁵ The Department of [Han] Chinese Medicine was installed in Gaesong Medical College (開城醫學專門學校) in 1959 as well, subsequently producing 160 mid- and low-level TEAM physicians every year.

²⁶ “Hakgye sosik,” *Joseon uihak* 7:4 (1960), 51-52.

²⁷ “Hakgye sosik,” *Joseon uihak* 3:1 (1961), 46-47.

²⁸ TEAM books published at the time include *An Introduction to [Han] Chinese Medicine* (漢醫學概論), *An Introduction to [Han] Chinese Pharmacy* (漢藥學概論), *Acupuncture and Moxibustion* (鍼灸學), *Qigong Treatment* (氣功療法), *Practical Herbology* (實用生藥), [Han] *Chinese Medical Preventive Treatment Methods for Hookworms* (十二指腸蟲에 對한 漢醫豫防治療法), *Precious Mirror of Eastern Medicine* 1-5, *A Compilation of Formulas and Medicinals* (方藥合編), *Longevity and Life Preservation in Eastern Medicine*, *A Compilation of Native* [i. e., Korean] *Formulas* (鄉藥集成方), *Secret Works for Universal Benefit* (廣濟秘笈), [Han] *Chinese Obstetrics and Gynecology* (漢醫產婦人科學), [Han] *Chinese Pediatrics* (漢醫小兒科學), [Han] *Chinese Internal Medicine* (漢醫內科學), [Han] *Chinese Diagnostics* (漢醫診斷學), *Warm Disease Studies* (溫病學), and *Biographies of Renowned Korean Physicians* (朝鮮名醫傳).

Eastern Medicine), too, was held, highlighting the work anew.

As a result, North Korea came to place at the forefront a new form of medicine that would be suited to the sentiments and constitutions of the North Korean people and serve the country's socialist construction rather than seeking simply to unify TEAM and Western medicine. Medicine that was tailored to society and the people alike, was unique, and encompassed the strengths of both TEAM and Western medicine was presented as the direction of genuine development to be pursued in the future. Not only Heo Jun's TEAM system and formulas but also Yi Jema's four-type constitutional medicine (四象醫學) now came to be highlighted as exemplars and prototypes of outstanding medical theories proposed by the Koreans, instead of being considered aspects of sectarianism.²⁹ In addition, as efforts to integrate TEAM and Western medicine came to be perceived in medical circles as the demonstration of advancement in the sciences and ideology, spurring figures in both camps to engage more actively in joint research.

4. The Proposal of the *Bonghan* Theory

It was around this period that Kim Bonghan³⁰ earnestly began to take interest in TEAM. Indeed, even a paper that he had presented only in 1957 concerned a physiological issue, typical of Western medicine.³¹ Simultaneously an initiator in the creation of the Academy of Medical Sciences (醫學研究院), North Korea's foremost

²⁹ “Urinaraui tagwolhan uihakja Yi Jema seonsaengui saeng'aewa geu'ui hwaldong” 우리나라의卓越한醫學者 李濟馬 先生의生涯와 그의活動 (The Life of Master Yi Jema, Korea's Outstanding Medical Scientist, and His Activities), *Joseon uihak* 8:5 (1961), 13-16.

³⁰ Kim Bonghan was born into a TEAM apothecary's family in Seoul in 1916. After graduating from Boseong Normal High School (普成高等普通學校) and the Faculty of Medicine at Keijō Imperial University (京城帝國大學) in 1940, he served as a physiology *Jogyo* 助教 at another university. Following the Liberation, he became a professor in the College of Medicine at Seoul National University. He then defected to the North during the Korean War and served as a professor at Pyeongyang Medical College and the director of the Academy of Gyeongrak (經絡研究院). The “gyeongrak system” (經絡體系) and the “[Bonghan] sanal theory” ([鳳漢]山알學說) that he presented in North Korea in the 1960s created a great stir both at home and abroad, and even determined his fate in the end. His career history has been introduced thus far in the *Joongang ilbosa dongseo munje yeonguso* 中央日報社 東西問題研究所, *Bukhan inmyeong sajeon* 北韓人名辭典 (A Dictionary of Who's Who in North Korea) (Seoul: Joongang ilbo, 1983), 64; Gong Dongcheol 孔東徹, *Kim Bonghan* (Seoul: Hakminsa, 1992); idem., *Soseol Kim Bonghan* 小說 金鳳漢 (Kim Bonghan: The Novel) (Seoul: Hansol Media, 1997) briefly and, at times, inaccurately.

³¹ The paper that Kim Bonghan reported in 1957 at a scientific symposium of *Uiyakhak yeonguso* 醫藥學研究所 (the Institute of Medicine and Pharmacy) in the Academy of Sciences was “Ilsi-jeok gaoni golgyeokgeunui heungbunseonge michineun yeonghyange daehan gijeon bunseok” 一時的加溫이骨格筋의興奮性에 미치는影響에對한機轉分析 (An Analysis of the Mechanism of the Effect of Temporary Heating on the Excitability of Skeletal Muscles). See, “1956

medical institution, and Chair of the Department of Physiology (生理學講座長) at Pyeongyang Medical College at the time, he was in a position to lead basic research on Western medicine. Therefore, it is clear that his interest on TEAM apparently had started to develop only recently.

Of course, Kim Bonghan had been familiar with TEAM from early on because he had grown up in a TEAM apothecary's (藥種商) family. This seems to have been one of the main backgrounds that prompted him actively to dive into TEAM research, ahead of other medical scientists. The experimental methods that he would apply to his research on *gyeongrak* later were familiar because they had already been in wide use in physiology. For these reasons, studying topics in TEAM, such as *gyeongrak*, with the methods and tools of Western medicine was not totally alien to him.

Nevertheless, it is not easy to uncover the direct factors that led Kim Bonghan to take up research on TEAM. There are a few grounds that make it possible to infer those factors. First, Pyeongyang Medical College, the foremost medical school in North Korea and the institution with which Kim Bonghan was affiliated, was the center of a national project to scientify TEAM.³² As someone responsible for a field in basic medicine, he would have been linked to this momentous project, if only because of his position. In addition, this period happened to witness a surge of ideological censorship across the country so that many people were being ousted from their positions due to problems with their ideologies and past. Amidst such a situation, Kim Bonghan, with a possibly problematic ideological past, would have needed to find a new turning point that would help him to change the situation, as with other scientists who had defected to North Korea from the South. This new turning point was none other than publicizing his own *raison d'être* and significance through new and innovative research. TEAM, which the North Korean authorities were encouraging at the time, and especially the scientific research on the *gyeongrak* system, the key task in TEAM, were among the most appropriate research topics.

Having defected to the North during the Korean War (1950-1953), Kim Bonghan, like other figures, had a possibly problematic ideological history. Like most scientists, he had no socialist ideology or past to boast of. Of course, he does seem to have been more or less interested in philosophy. The contents, however, were mainly about liberalism and idealism (唯心論).³³ In addition, the fact that he had defected

nyeondo Uiyakhak yeonguso gwahak yeongu balpyohoe" 1956年度 醫藥學研究所 科學研究發表會 (1956 Scientific Symposium of the Institute of Medicine and Pharmacy), *Bulletins of the Academy of Sciences* (1957), 55-56.

³² Unlike other medical schools, Pyeongyang Medical College led academic research. Perhaps because of this, it was the only institution to be named *Uihak taehak* (醫學大學; literally, "medical science university") while other schools were called *Uigwa taehak* (醫科大學; literally, "medical field college").

³³ An alumnus of his (Han Gyeokbu 韓格富) has stated, "Because he [i. e., Kim Bonghan] did not harbor the socialist ideology... I do not think that he would have had a favorable opinion of communism." See Gong Dongcheol, *Kim Bonghan* (cit. n. 30), 49. The overall characteristics and

to North Korea neither early on nor at his own initiative, but belatedly and among the last ones, was like an original sin that would always follow him whenever problems arose. Moreover, unlike other scientists, he seems to have been involved, however passively, in the foundation and operation of the right-wing Korea Democratic Party (*Han'guk minjudang* 韓國民主黨, KDP) during his years in South Korea.³⁴ Such aspects are likely to have prompted him to focus, more so than others, on research topics with clear social and political significance.

At the time, with the rise of new technocrats, North Korean scientific circles were engrossed in the pursuit of science and technology in a hitherto unprecedented direction. In keeping with changing environments both at home and abroad, they sought after science and technology that would agree with the regime's independent line, be more appropriate for the nation's circumstances, be more suited to the country's cultural traditions, and contribute to North Korean society. In particular, Ri Seunggi's unprecedented success in industrializing vinylon *en masse* in 1961 led to a veritable boom in the promotion of science and technology based on an independent line.³⁵ With this feat as the occasion, self-reliant research in the sciences came to be advocated more actively. In medical circles, the revival of TEAM and integrative research on this field and Western medicine came to win greater interest.

Without an exception, those who led scientific research at this time were South Korean scientists who had defected to the North. Including Ri Seunggi, they were

tendencies of scientists and engineers who defected to North Korea are recounted in detail in Kim Geun Bae, "Wolbuk gwahak gisuljawa Heungnam gonggeop daehakui seolip" 越北 科學技術者와 興南工業大學의 設立 (Scientists and Engineers Who Defected to North Korea and the Establishment of the Heungnam College of Technology), *Asea yeon'gu* 亞細亞研究 40:2 (1997), 117-130.

³⁴ Though Kim Bonghan allegedly participated as an initiator in the creation of the KDP according to Gong Dongcheol, *Kim Bonghan* (cit. n. 30), 74-76, he was not very active in light of what has been confirmed thus far. Nevertheless, it is possible for him to have been linked to the foundation and operation of the party in any way or, at least, entered his name only. This is because Yi Gapsu 李甲洙, the head professor of the Department of Physiology (生理學教室) in the College of Medicine at Seoul National University, with which Kim Bonghan was affiliated, served as the chair of the party's Welfare Research Committee (厚生研究委員會). In addition, numerous professors from the same college participated in this committee. Jo Heonyeong, who had a close relationship with Kim Bonghan's father, was active as the Regional Division Head (地方部長) and, later, the Organizational Division Head (組織部長) of the same party as well. See Ju Geunwon 朱權源, *Hamchunwon ui hoasang* 含春苑의 回想 (Recollections of Hamchun Garden) (Seoul: Hyomunsa, 1983), 58; Guksa pyeonchan wiwonhoe 國史編纂委員會, *Jaryo Daehan min'guksa I* 資料大韓民國史 I (Materials on the History of the Republic of Korea I) (Seoul: Tamgudang, 1970), 62-63; Song Namheon 宋南憲, *Haebang samnyeonsa II: 1945-1948* 解放三年史 II: 1945-1948 (A History of the Three Years after the Liberation II: 1945-1948) (Seoul: Ggachi, 1985), 439-441, etc.

³⁵ Kim Geun Bae, "'Ri Seunggi ui gwahak'gwa Bukhan sahoe" '李升基의 科學'과 北韓社會 (Ri Seunggi's Science and North Korean Society), *Han'guk gwahaksa hakhoeji* 韓國科學史學會誌 20:1 (1998), 11-17.

figures such as Ryeo Gyeonggu 려경구, Gye Eungsang 계응상, and Han Heungsik 한흥식. Having lost power in the process of ideological censorship during the latter half of the 1950s, they had returned to scientific research from scientific administration. Consequently, these figures actually had opportunities to devote themselves fully to scientific research now and were able to make full use of their accumulated research experiences. Moreover, a “dream of science,” their main motive for defecting to North Korea in the first place, prompted them to focus on scientific research more than did others. In other words, these figures no longer had ways to be compensated for their defection besides scientific research.

Kim Bonghan presented his first paper, “Gyeongrak siltae’e gwanhan yeon’gu” 經絡實態에 관한 연구 (A Study on the Substance of *gyeongrak*), in August 1961.³⁶ At the time, not only research on TEAM was being encouraged in North Korea as a self-reliant field but also new research on Oriental medicine was already being attempted in countries including China, Japan, and Soviet Union. Research in these nations focused, above all, on elucidating the *gyeongrak* theory, which may be called the heart of TEAM. More specifically, the ultimate goal was to uncover the essence of *gyeongrak* by studying aspects of *gyeonghyeol* 經穴 (acupuncture points) such as resistance, electric potential, and electrograms.

In keeping with such research trends, Kim Bonghan likewise established the exploration of the reality of *gyeongrak* as his research topic. As in research abroad, he first examined the characteristics of *gyeonghyeol* through electrophysiological methods and, based on them, began to study the reality of *gyeongrak*.³⁷ The experimental methods that he used at this time did not differ from those employed overseas, the only difference being that he obtained more experiment data from experiments on diverse body parts. This was an outcome of research conducted in a collective manner by many with a strong faith in TEAM. The research collective was lined up with a large number of Western physicians and TEAM physicians from both the of Physiology at Pyeongyang Medical College, with which Kim Bonghan himself was affiliated, and the Gyeongrak Laboratory (經絡研究室) in the Institute of Medicine at the same university, buttressed also by younger scholars and mentees who had defected to the North together.³⁸ Empowered by this, his research came to proceed a

³⁶ This and his subsequent papers are recounted in detail in Fujiwara Satoru 藤原知, *Keiraku no hakken: Bonghan gakusetsu to shinkyū igaku* 經絡の発見: ボンハン學說と針灸醫學 (Osaka: Sogensha, 1967), translated into Korean as: ed. and trans. *Saenghwal uihak yeonguhoe* 生活醫學研究會, *Gyeongrakui dae balgyeon: Kim Bonghan hakseolui gyeong’i wa jiapbeop daegye* 經絡の大発見: 金鳳漢學說의驚異와指壓法大系 (The Great Discovery of Gyeongrak: The Wonder of the Kim Bonghan Theory and an Outline of Shiatsu Techniques) (Seoul: Irwol seogak, 1993), 61-174.

³⁷ Kim Bonghan, “Gyeongrak siltae’e gwanhan yeon’gu,” *Joseon uihak* 9:1 (1962), 5-13.

³⁸ As the most representative figure who worked with him, Kim Se-uk, a colleague in the College of Medicine at Seoul National University, can be cited. In fact, his name is mentioned importantly in Kim Bonghan’s research papers as well.

step further from the opinion, or the fruit of his earlier studies, that organisms had body parts called *gyeonghyeol*, which affected and were affected by visceral activities. In other words, none other than *gyeongrak* existed as an independent reality, apart from other systems (see Table 1). At the time, foreign researchers' general stance was to see *gyeongrak* as a part of specific nervous tissues.

Regarding the results of his innovative research, Kim Bonghan supposedly was often asked, "How did you discover *gyeongrak*, which countless scholars around the world have failed to elucidate?" He answered that they were because of a "firm conviction." Because he was firmly convinced in the existence of the *gyeongrak* system, he was undaunted by repeated failures on several hundred, several thousand occasions, realizing his conviction and succeeding in the end.³⁹ With a strong faith in the existence of what TEAM termed *gyeongrak* already from the start, he thus steadfastly maintained a research attitude of seeking to prove it. This seems to have stemmed from factors including his thorough trust in classical TEAM theories and attitude of grasping functions and forms in a unified and dialectic manner (i. e., the idea that an entity lay behind a function). It was why, in his research, he had been able to "raise loftily [the] bold scientific conceptions and precise research methods, and extraordinary ability for development unafraid of difficulties [required for success]." ⁴⁰

The gist of the results of Kim Bonghan's research was that, first, there existed in the human body many *gyeonghyeol*-like points with electrical characteristics, which were arranged in lines. When particular parts of these points were stimulated, the effects supposedly were continuously transmitted to other parts along the lines. Their transmission rate allegedly was far slower than that of nerves; and their transmission paths likewise differed from those of the nervous or vascular system, being identical to the movement of *gyeongmaek* (meridian channels; 經脈) presented in [East Asian medical] classics. Moreover, he even presented in part the specific forms of *gyeonghyeol* and *gyeongmaek*, demonstrating that *gyeongmaek* lost their functions when they were severed. He therefore wrote in his paper that he had finally elucidated the reality of *gyeongrak*, which constituted a "hitherto unknown, new anatomical histological system." Of course, *gyeongrak* was only understood as transmission path of stimuli, and its main functions had yet to be elucidated completely.

When examined carefully, the paper format that Kim Bonghan chose evidently differed somewhat from the general format of the era. This did not stem merely from his intellectual curiosity but revealed his full understanding of and efforts actively

³⁹ Kim Bonghan, "Guijunghan geoseun sinnyeomida" 貴重한 것은 信念이다 (What Is Valuable Is Conviction), *Daejung gwahak* 大衆科學 (Popular Science) 1 (1966), 5-6.

⁴⁰ Choe Changseok 崔昌錫, "Gyeongrak gyetongui balgyeoneun hyeondae sangmulhakgaw uihakeseoui ildae hyeokmyeong ida" 經絡系統의 發見은 現代生物學과 醫學에서의 一大革命이다 (The Discovery of the Gyeongrak System Is a Grand Revolution in Contemporary Biology and Medicine), *Geulloja* (Dec. 1963), 10.

to fulfill political and ideological demands at the time. It is because the introduction to his paper starts not with contents directly related to the actual research but with this comment: “The present research project was initiated based on the spirit of the decision of the Third Congress of the Workers’ Party of Korea regarding the inheritance and development of Eastern medicine, valuable heritage created by our forefathers.” Presumably added later, the conclusion even presents the self-assessment that “[o]ur accomplishment is yet another proof of the validity of our Party’s science policies concerning the maintenance of *Juche* in scientific research projects and the simultaneous development of contemporary medicine and Eastern medicine.”⁴¹ All of this shows that Kim Bonghan, unlike others, was responding quite sensitively to changes or trends in the circumstances of the period. In addition, the format of this paper came to be established as the new standard with the full-fledged development of “*Juche* science” (主體科學) in the 1970s, and this study seems to have been the beginning.

However, Kim Bonghan’s paper failed to receive attention for some time. Indeed, it was not even published in academic journals. This was because the paper’s contents were so revolutionary that their veracity had to be determined, which would take considerable time. Nevertheless, academic comments on him were nowhere to be found until the subsequent publication of his papers in academic journals. Certain foreign scientists supposedly disbelieved or opposed the contents as well.⁴² This is probably because the grounds of Kim Bonghan’s first paper were in fact very insufficient. Regarding the experiment methods used to elucidate the most important contents, he only wrote, “methods that we have devised”; and even the data that he presented as the grounds likewise seem weak. Consequently, based on this early paper alone, it would have been difficult to discern the factuality of his research, not to mention to gain trust in its scientificity.

Moreover, certain strange aspects emerge when the process through which Kim Bonghan acquired a doctoral degree⁴³ and a professorship, both of which were granted rarely and only to outstanding figures, is examined closely. Decisions on prospective recipients of academic degrees presented at the time had already been made on January 23, 1962 through the ratification of the Presidium (常務委員會) of the State Professorship and Degree Conferment Committee (國家學位學職授與

⁴¹ This mention in the conclusion appeared, rather belatedly, in his paper published in the *Bulletins of the Academy of Sciences* (Mar./Apr. 1962).

⁴² Choe Changseok, “Gyeongrak gyetongui” (cit. n. 10).

⁴³ Up to this point, figures in medical circles to have received doctoral degrees included Jang Giryoo 張起呂 (1948; subsequently defected to South Korea), Choe Myeonghak 崔明鶴 (1948), Ju Seongsun 朱星淳 (1949), Yi Horim 李鎬臨 (1949), Choe Eungseok 崔應錫 (1949), Hong Hakgeun (1949), and Ju Minsun 朱敏淳 (1961). See the *Joseon jung’ang tongsinsa* 朝鮮中央通信社 (Korean Central News Agency), *Joseon jungang yeongam* 朝鮮中央年鑑 (Korean Central Yearbook) (Pyeongyang: Korean Central News Agency, 1949), 132 and *Joseon jungang yeongam* (Pyeongyang: Korean Central News Agency, 1956), 448, etc.

委員會), a list excluding Kim Bonghan. Not much later, on January 29, however, the Presidium met again and additionally confirmed the conferment of the highest degree and academic post on him.⁴⁴ Judging from the fact that he was the sole recipient, the meeting of the Presidium at this time apparently was held specially to ratify his dissertation. His research thus seem to have been acknowledged based on sudden decisions, probably after considerable internal struggle.

Kim Bonghan's research thus was highlighted and finally began to gain attention only a year after the presentation of his paper. A summary of his paper was finally published in an academic journal, and a foreword elucidating its significance was added. His research "...is a great discovery that has pioneered a new stage in the development of contemporary biology and medicine. This is a valuable contribution to the treasure trove of humanity's science and a shining achievement of medical science in our country."⁴⁵ Suddenly, the significance of his research came to be stressed as unprecedented in history.

At this time, North Korea was witnessing the spread of the *Juche* ideology, mainly in scientific circles, under the initiative of newly emerging technocrats. With the Fourth Congress of the WPK as the occasion, Kim Changman 金昌滿, who had strongly advocated an independent line, rose as the Vice Premier (副首相), and high-ranking figures in the State Science and Technology Commission (國家科學技術委員會) and the Academy of Sciences came to participate in the Cabinet, thus leading to efforts for the establishment and expansion of *Juche* in all fields. This spilled into a power struggle in scientific circles between the existing foreign-educated group and the newly rising domestically educated group, with domestically educated figures from the field taking the initiative in the end.⁴⁶ Amidst all such circumstances, Kim Bonghan's research on *gyeongrak*, aided by a new and very strong support group, came to be seen as a representative and self-reliant model in medicine.

This dramatic rise of Kim Bonghan's research seems to have been prompted more by political and ideological considerations than by scientific judgments. Those who

⁴⁴ "Gukga hakwi hakjik suyoe wiwonhoe sangmu wiwonhoeeseo bijundoen hakwi ronmundeul (1962 nyeondo)" 國家學位學職授與委員會 常務委員會에서 批准된學位論文들 (1962年度) (Dissertations Ratified by the Presidium of the State Professorship and Degree Conferment Committee [1962]), *Bulletins of the Academy of Sciences* (May/Jun. 1962), 57-60; "Gendai seibutsugaku, igaku ueni shindankai o kakushita idaina hakken: Kim Bonghan hakushi no 'keiraku no jittai ni kansuru kenkyū'" 現代生物學, 醫學上に新段階を劃した偉大な發見—金鳳漢博士の「經絡の實態に關する研究」(A Great Discovery Marking a New Stage in Contemporary Biology and Medicine: Dr. Kim Bonghan's '[A] Study on the Substance of Gyeongrak'), *Gekkan chōsen shiryō* 月刊朝鮮資料 2.2 (Feb. 1962), 48.

⁴⁵ "Segye gwahakui bomulgoe tagwolhan giyeoreul han urinara uihak gwahakui bitnaneun seonggwa" 世界科學の寶物庫에 卓越한 寄與를 한 우리나라 醫學科學의 빛나는 成果 (The Shining Fruits of Science in Our Country, Which Has Made Outstanding Contributions to the Treasure Trove of World Science), *Joseon uihak* 9:1 (Jan. 1962), 3-4.

⁴⁶ Kim Geun Bae, "Ri Seunggi ui gwahak'gwa" (cit. n. 35), 18-24.

led the high evaluation of his accomplishments at the time were mostly WKP officials and strongly political scholars.⁴⁷ It would have been because, as shown in the foreword, the fruits of his research constituted "...yet another proof of the validity of our Party's science policies regarding the maintenance of *Juche* in scientific research projects and the simultaneous development of contemporary medicine and Eastern medicine." Next, in February of the same year, Premier Kim Il-sung himself came forth and sent to Kim Bonghan and the *gyeongrak* research collective a congratulatory message for "provid[ing] firm scientific and material grounds to theories in Eastern medicine, which had a long history in our country, and [making] outstanding contributions to the development of contemporary biology and medicine," thus adding even more authority to their research.⁴⁸

From this time on, *donguihak* 東醫學 (Eastern medicine) not only was frequently used but also gradually became established as the official terminology, replacing the term *hanuihak* 漢醫學 ([Han] Chinese medicine). The contrast is very clear before and after 1962. It was because, with Kim Bonghan's research on *gyeongrak* as the occasion, North Korea came to have considerable confidence in the exploration of TEAM and decided to proceed in a direction that would further establish *Juche*. Of course, the term "Eastern medicine" had been used earlier, too, but it had only been an abbreviation of "Oriental medicine" (東方醫學) corresponding to Western medicine, not a full-fledged emphasis on TKM's uniqueness *vis-à-vis* TCM. In other words, the North Korean authorities thought that the country no longer had to rely on China and, instead, could now produce accomplishments far surpassing those of its neighbor by developing the sciences on its own. Consequently, the name "Eastern medicine" was an implicit expression declaring both at home and abroad North Korea's pursuit of independent learning.

Subsequently, in November 1963, Kim Bonghan presented his second paper. This time, of course, it was published immediately in academic journals. The study was presented in publications no less than those including the *Bulletins of the Academy of Sciences*, the foremost science journal in North Korea, as well as the *Journal of the Academy of Medical Sciences* (朝鮮民主主義人民共和國 醫學科學院 學報) and *Korean Medicine* (朝鮮醫學), with the allocation of considerable space to it and the use of very high-quality paper and color photographs. The study was titled "On

⁴⁷ These figures had been in charge of science- and public health-related duties in the WKP or the Ministry of Public Health. For example, see Ri Jongnyul 리종률, "Uri dang bogeon jeongchaekui widaehan saenghwalyeok" 우리 당 보건政策의 偉大한 生活力 (The Great Viability of Our Party's Public Health Policies), *Geulloja* (Mar. 1962), 33; Choe Changseok, "Uri dang bogeon jeongchaekui widaehan seungni" 우리 당 보건政策의 偉大한 勝利 (The Great Victory of Our Party's Public Health Policies), *Geunroja* (Oct. 1962), 7-8, etc.

⁴⁸ Gang Yeongchang 姜永昌, "Uri dang gwahak jeongchak gwancheol eseu seong'gwawa geuui hwakdae ganghawreul wihayeo" 우리 당 科學政策貫徹에서의 成果와 그의 擴大強化를 爲하여 (On the Fruits of the Realization of Our Party's Science Policies and for Their Expansion and Reinforcement), *Bulletins of the Academy of Sciences* (Mar./Apr. 1962), 6.

the *Gyeongrak* System” (經絡系統에 關하여). In the discussion process, it was suggested that main elements of the system be named after their discoverer⁴⁹—the only case in North Korea, in fact—so that the theory came to be dubbed the “*Bonghan* theory” from this time onward. Of course, perhaps to show socialist collective research methods, the author of the study was indicated as the “Pyeongyang Medical University *Gyeongrak* Research Institute” (平壤醫學大學 經絡研究所) instead of “Kim Bonghan.”

Kim Bonghan’s second paper was far more elaborate and vaster in content than was his first. Diverse methods were applied to the experiments as well. The costly microscopes, radiation-tracking devices, qualitative inorganic analyzers, and various reagents used here had been specially procured from the Soviet Union and Eastern Europe. As a result, this study presented new research results and claims to a considerable extent (see Table 1):

Table 1. Changes in the *Bonghan* theory per period and their main contents

Period Contents	1st (Aug. 1961)	2nd (Nov. 1963)	3rd (Apr. 1965)
Researchers named	Kim Bonghan	Kim Bonghan, Kim Seuk 김 세옥, Bak Jeongsik 박정식, (and Gwon Jeongdo 권정도)	Kim Bonghan
Research methods	Electrical and physiological methods	Electrochemical methods, physiological methods, vital staining, radiometry, observations with fluorescence/phase contrast microscopes, and quantitative chemical analysis	Biochemical methods, histophysiological methods, quantitative chemical analysis, anatomical histological methods, and observations with stereo/electron microscopes
Experiment subjects	Mainly rabbits	Mainly rabbits	Rabbits and human body

⁴⁹ “Kim Bonghan kyosureul birothan *gyeongrak* yeongu jipdanui yeongu seonggwae daehan haksul bogohoe jinhaeng” 金鳳漢教授를 비롯한 經絡研究集團의 研究成果에 對한 學術報告會 進行 (A Scientific Symposium on the Fruits of Research by the *Gyeongrak* Research Collective Including Professor Kim Bonghan Held), *Joseon uihak* (Dec. 1963), 25.

Major names	<i>gyeonghyeol</i> and <i>gyeongmaek</i>	<i>Bonghan soche</i> 鳳漢小體 (<i>Bonghan</i> corpuscles), <i>Bonghan gwan</i> 鳳漢管 (<i>Bonghan</i> ducts), and <i>Bonghan aek</i> 鳳漢液 (<i>Bonghan</i> liquor)	Elaboration: <i>Bonghan</i> corpuscles, <i>Bonghan</i> ducts, <i>Bonghan</i> liquor, and <i>sanal</i> [<i>Bonghan</i> granules; 鳳漢산알]
Locations	Superficial and subcutaneous	Superficial, profound, subcutaneous, intra- and extra-vascular, and periorganic	Elaboration: superficial, profound, subcutaneous, intra- and extra-vascular, and periorganic
Materials contained	<i>gyeonghyeol liquor</i> [經液]: colorless and transparent	<i>Bonghan</i> liquor: large amounts of DNA and some RNA	<i>Bonghan</i> liquor: <i>sanal</i> (contain large amounts of DNA)
Key functions	<i>gyeongrak</i> -organ coupling reactions	A link with nucleic acids presumed	<i>sanal</i> -cell cycle
Research tendency	Imitation of and dependence on achievements abroad	Pursuit of North Korea's independence and uniqueness	Ostentation of North Korea's superiority worldwide (Nobel Prize in the sciences expected)
Self-evaluation	Elucidation of the reality of <i>gyeongrak</i>	Demonstration of the <i>gyeongrak</i> system (structures and functions of <i>gyeongrak</i>)	Elucidation of the relationship between the <i>gyeongrak</i> system and life phenomena (<i>sanal</i> theory)

Sources: Kim Bonghan, “*Gyeongrak siltae’e gwanhan yeon’gu*” ([A] Study on the Substance of *Gyeongrak*), *Joseon uihak* 9:1 (1962), 5-13; *Gyeongrak* Research Institute, “*Gyeongrak gyetong’e gwanhayeo*” (On the *Gyeongrak* System), *Bulletins of the Academy of Sciences* (Nov./Dec. 1963), 6-35; and Academy of *Gyeongrak*, “*Gyeongrak chegye*” 經絡體系 ([The] *Gyeongrak* System) and “*Sanal hakseol*” 산알學說 ([The] *Sanal* Theory), *Bulletins of the Academy of Sciences* (May 1965), 1-62.

When certain aspects are examined, first, the theory argued that the *Bonghan* corpuscles (i. e., reality of *gyeonghyeol*) were distributed in not only the skin but also diverse inner parts of the body. Connecting them, the *Bonghan* ducts (i. e., reality of

gyeongmaek) supposedly existed in not only superficial and profound but also diverse vessels, including blood vessels and lymph nodes. Unlike other body parts, the *Bonghan* corpuscles allegedly exhibited unique electrical activities called the “*giyeok-wave*” (ㄱ波), “*nieun-wave*” (ㄴ波), and “*digeut-wave*” (ㄷ波). As for epochal contents, it was claimed: inside the *Bonghan* ducts was the *Bonghan* liquor (i. e., reality of the *gyeonghyeol* liquor), which contained far more nucleic acids, especially DNA, than did other tissues. In addition, this *Bonghan* liquor supposedly circulated very slowly in a particular direction. This was seen as implying a certain, close relationship between the activities of the *gyeongrak* system and nucleic acids in the *Bonghan* liquor, which existed in a peculiar manner unrelated to cell nuclei.⁵⁰

Consequently, this study allegedly had led to a materialistic grasp of nucleic acids by re-understanding the *gyeongrak* system not in terms of *qi* 氣 in classical TEAM theories but of contemporary science, as circulatory paths of the *Bonghan* liquor, and elucidating the system’s actual contents as none other than large amounts of nucleic acids. Western countries hitherto had seen DNA in cells as the ultimate genetic material and sought to explain organisms’ genetic phenomena through it. According to the *Bonghan* theory, this material was closely linked to the independent *gyeongrak* system. Similarly to his research attitude in the first paper, he here stated that he had conceived the *Bonghan* liquor inside the *Bonghan* ducts would play important roles in the manifestation of life phenomena and, if so, would consist of nucleic acids and endeavored to elucidate this.⁵¹

In light of its importance, this second paper was presented at a well-attended independent symposium. Here, in attendance were major figures from biology and medicine in particular. On the surface, the study not only boasted epoch-making contents but also presented the system and structure of a formal paper and large amounts of data. With the introduction of advanced experiment methods, systematic structure of the research results, and broad experiment data, this study thus came to be acknowledged firmly for its scientificity by figures not only outside science but also inside the discipline. All of the participants in the symposium evaluated Kim Bonghan’s research as a “new, outstanding contribution” and a “completely new discovery” indeed in the development of biology and medicine. Of course, nowhere to be found even on this occasion was any systematic, academic assessment of his research. In fact, there would have been no one in North Korea at the time capable of strictly evaluating and discussing this paper and, even if otherwise, would have found it difficult to come forth due to the social climate.

⁵⁰ Gyeongrak Research Institute, “*Gyeongrak gyetong’e gwanhayeo*” (On the *Gyeongrak* System), *Bulletins of the Academy of Sciences* (Nov./Dec. 1963), 6-35.

⁵¹ Kim Bonghan, “*Guijunghan geoseun sinnyeomida*” (cit. n. 39), 5-6.

5. The Impact of Follow-up Research

The impact of Kim Bonghan's second paper was far greater than that of his first paper. When the official evaluation of the study from this period is examined:

Indeed, the *gyeongrak* research collective including Professor Kim Bonghan has shown an outstanding model of the communist scientist, helping and leading one another with a firm belief in a dauntless revolutionary spirit even when faced with repeated failures and hardships in scientific research projects and making a great international discovery based on Marxist-Leninist research methodology and in a short period... The world will rightly evaluate highly this great scientific achievement from the era of the Workers' Party [of Korea] not only today but also in the future, even in distant centuries.⁵²

The research on the *gyeongrak* system demands a full-fledged reexamination of existing academic theories, which have explained fundamental issues in life phenomena, including biological regulation, one-sidedly without knowing the undeniable objective existence of the *gyeongrak* system... This great discovery is a revolutionary occurrence that has pioneered a new stage in the development of contemporary biology and contemporary medicine and erected a landmark in the history of world science.⁵³

In fact, Kim Bonghan's research came to be seen as revolutionary accomplishments on par with Charles Darwin's theory of evolution, which had made a new epoch in the history of science, and Ivan Pavlov's theory of conditioned reflexes, which had been acknowledged as authoritative especially in the socialist bloc. It was no idle talk to say, "How can we not be excited and moved before this fact that, from now on, people around the world cannot discuss contemporary biology and medicine without mentioning our country [i. e., North Korea]!"⁵⁴

In other words, within the academic circle, this theory now not only provided theories in Eastern medicine with firm physical grounds but also prompted a reexamination of all existing theories in biology and medicine. For example, the argument ran, it was no longer possible correctly to elucidate genetics, protein metabolism, and biological activities without an appropriate understanding of the *gyeongrak* system. The theory was expected to contribute considerably to improvements in human

⁵² "Illyu gwahaksa sange giri bitnal widaehan gongjeok" 人類科學史上에 길이 빛날 偉大한 功績 (A Great Accomplishment That Will Shine for Long in the History of Humanity's Sciences), *Joseon uihak* (Dec. 1963), 1.

⁵³ *Joseon jung'ang tongsinsa* (Korean Central News Agency), *Joseon jungang yeongam* (Pyeongyang: Korean Central News Agency, 1964), 206.

⁵⁴ Ibid.

health, longevity, and fatigue in clinical treatments and the development of the industries and the economy such as veterinary medicine and animal husbandry as well.⁵⁵ It was claimed, the effects of this research on society were so limitless as to be called revolutionary.

It was from this time that Eastern medicine came to be established as an institution in earnest. Professional journal *Donguihak* 東醫學 (Eastern Medicine) began to be published, and the Eastern Medicine Laboratory (東醫學研究室) was reorganized and expanded into the Institute of Eastern Medicine (東醫學研究所) as well. In addition, general [Han] Chinese medical clinics were vastly expanded, and the Department of Eastern Medicine (東醫科) was widely installed in Western preventive treatment institutions. In other words, Eastern medicine thus further consolidated its position as an independent academic discipline and broadened its social application. Conversely, Western medicine slowed down relatively and, in the end, decreased in its share in medicine overall. For example, following the foundation in 1959 of Haeju Medical College (海州醫科大學), the fourth medical school nationwide, no medical school was additionally established until 1968.⁵⁶ Despite a continuously increasing social need for medicine, the growth of Western medicine was not very apparent. This seems to have been related to the new institutionalization and dramatic expansion of Eastern medicine.

On top of it all, in February 1964, North Korea adopted Cabinet Decision (內閣決定) No. 10 in order to expand and to further develop the research project on the *gyeongrak* system and reorganized the *Gyeongrak* Research Institute at Pyeongyang Medical College into the Academy of *Gyeongrak* of the Democratic People's Republic of Korea. An immense institution equipped with over forty laboratories, a scale on par with that of the Academy of Medical Sciences (醫學科學院) at the time, the Academy of *Gyeongrak* was headed by Kim Bonghan, who had led research on *gyeongrak*.⁵⁷ Also, April saw the creation of an independent society called the Korean Society of *Gyeongrak* (朝鮮經絡學會), with Kim Bonghan, once again, as the president. Moreover, he was personally recognized for the distinguished service of research on *gyeongrak* as well and selected as a laureate of the People's Prize (人民賞), an award conferred on the greatest North Korean scholars,⁵⁸ and Kim Se-uk and Gwon Jeongdo, who had led research on *gyeongrak* along with Kim Bonghan, were

⁵⁵ Rim Yeongju 림영주, "Widaehan gongjeok" 偉大한 功績 (Great Accomplishments), *Daejung gwahak* (Jun. 1965), 59-61; and Choe Changseok, "Gyeongrak gyetongui balgyeoneun" (cit. n. 40), 4-8.

⁵⁶ Bak Yunjae and Bak Hyeoung'u, "Bukhanui uihak gyoyuk jedo yeongu" 北韓의 醫學教育制度 研究 (A Study on [the] Medical Educational System in North Korea), *Uisihak* 醫史學 (Korean Journal of Medical History) 7:1 (1998), 68.

⁵⁷ *Joseon jung'ang tongjinsa* (Korean Central News Agency), *Joseon jungang yeongam* (Pyeongyang: Korean Central News Agency, 1965), 170.

⁵⁸ The first People's Prize in the sciences was bestowed on Ri Seunggi in 1959 in recognition of his research on nylon.

honored with doctoral degrees. In addition, research results were turned into a science film, titled the *World of Gyeongrak* (*gyeongrakui segye* 經絡의 世界), and widely presented to the public.

In addition, the North Korean authorities immediately translated Kim Bonghan's research papers into foreign languages and distributed them widely in diverse countries. Judging from the fact that his papers were published not only in English and Russian but also in languages including Chinese, Japanese, and French, the nation seems to have proceeded with a promotion campaign worldwide. His papers were the first North Korean scientific papers to be published in Western languages such as English.⁵⁹ Of course, such cases have been difficult to find since then. His English-language papers were distributed to such an extent that they are widely housed in major American libraries even today.

This seems to have aimed at not only publicizing Kim Bonghan's groundbreaking research but also, through them, winning the Nobel Prize in the sciences. The North Korean authorities saw his research results as an achievement more than deserving of the award. Perhaps for this reason, the English translation of his paper cited as its author "Kim Bong Han," the individual, rather than the "Gyeongrak Research Institute," unlike the original Korean version. Also, perhaps to show that he had studied basic sciences, it introduced him as a "D. Sc." (doctor of science) specializing in biology instead of a "D. M." (doctor of medicine). In addition, it is self-evident that naming the major elements of the theory after the researcher, a rare case in North Korea, likewise would have been to elevate his position to the utmost. His research was seen as a most outstanding feat that the nation could boast of, second to none even around the world.

Next, Kim Bonghan and the *gyeongrak* research collective further elaborated and systemized research on the *gyeongrak* system, boldly presenting far more novel theories. Held in April 1965, the first scientific symposium of the Korean Society of *Gyeongrak* served as an arena in which these researchers could pour out their claims unreservedly (see Table 1). First, "[The] *Gyeongrak* System," the third paper, presented many new facts. One of the important ones was that the *gyeongrak* system consisted of the internal *Bonghan* duct system inside blood vessels and lymphatic vessels, external *Bonghan* duct system, intra-external *Bonghan* duct system, and neural *Bonghan* duct system; and all of these systems were mutually connected, thus forming one large system. The *Bonghan* ducts in these diverse systems were linked to the intraorganic *Bonghan* corpuscles and the terminal *Bonghan* corpuscles and, furthermore, directly to the nucleus of each tissue cell through the terminal *Bonghan* ducts as well. As a result, the *Bonghan* liquor allegedly circulated by starting from cells, going through the superficial *Bonghan* corpuscles—profound *Bonghan* cor-

⁵⁹ In English, Kim Bong Han, *On the Kyungrak System* (Pyeongyang: Foreign Languages Publishing House, 1964) was published.

puscles—*intraorganic Bonghan* corpuscles—terminal *Bonghan* corpuscles, and returning to tissue cells. In addition, the argument ran, the *gyeongrak* system was the first thing to emerge during the generation and differentiation of organisms and existed in all organisms including not only animals but also plants.⁶⁰

Far more pioneering than this was Kim Bonghan's fourth paper, "[The] *Sanal* Theory," which was presented at the same symposium and claimed that the main function of the *gyeongrak* system lay in the manifestation of life activities. According to the study, inside the *Bonghan* liquor, which circulated throughout the body along the *Bonghan* ducts, were fine particles. Dubbed the "*(Bonghan) sanal*,"⁶¹ these particles supposedly contained large amounts of DNA and had unique dynamic power and particular metabolic functions. In other words, circulating in the *Bonghan* ducts, these *sanal* allegedly underwent a series of process called the "[*Bonghan*] *sanal*-cell cycle" (鳳漢산알-細胞環): they grew to become cells, which in turn became *sanal* again. If so, then cell division, in fact, was merely a stage in this *sanal*—cell—*sanal* process as well. In addition, when the *sanal* were obtained from disparate superficial *Bonghan* corpuscles and artificially cultured, the argument ran, disparate types of cells would be formed. The source of life thus lay in the *sanal*, which contained large amounts of DNA and circulated in the *Bonghan* ducts along with the flow of the *gyeongrak* system. Consequently, the *sanal* instead of the cell came to be understood as the basic unit of life, with the process ultimately dominated and overseen by the *gyeongrak* system.⁶²

Some predicted that Kim Bonghan's research would lead to a new scientific revolution and play a part in the advent of a new social system.⁶³ In their view, the *gyeongrak* theory, like Darwin's theory of evolution, would not remain on the level merely of an innovation in biology and medicine but would cause "revolutionary changes" in all fields. In addition, it was expected that this theory would also pave the way for "communist medicine" corresponding to a communist social system, that is, for longevity and the treatment of intractable diseases, the ultimate human wish. The logic was that since the mechanisms of the generation, growth, and death of cells, the keys to aging and death, were now known, there would be revolutionary

⁶⁰ Academy of Gyeongrak, "Gyeongrak chegye" 經絡體系 ([The] Gyeongrak System), *Bulletins of the Academy of Sciences* (May 1965), 1-38.

⁶¹ These particles were thus named because they were said to be living [*san* 산] and in an egg shape [*al* 알].

⁶² Academy of Gyeongrak, "sanal hakseol" 산알學說 ([The] *Sanal* Theory), *Bulletins of the Academy of Sciences* (May 1965), 39-62.

⁶³ Han Seheon 한세헌, "Saengmyeong hyeonsangui bonjil haemyeongeseo irukhan widaehan eopjeok" 生命現象の本質解明에서 이룩한 偉大한 業績 (A Great Achievement Made in Elucidating the Essence of Life Phenomena), *Geunroja* (May 1965), 6-13; and Gwon Jeongdo, et al., "Jwadamhoe: uri sidaeui takwolhan gwahakjeok eopjeok 座談會—우리 時代의 卓越한 科學的 業績 (Round Table Talk: Outstanding Scientific Achievements of Our Age), *Joguk* 祖國 (The Fatherland) 2:7 (1965), 112-14.

improvements in life span and preventive treatment. Indeed, Kim Bonghan and his research collective pledged to conduct research in earnest for “disease-free longevity in a socialist paradise on earth,” the wish of the people, starting in the following year.⁶⁴

Right after this, from mid-1965 onward, the expression “*Juche* ideology” was officially used in certain quarters for the first time. The main tenet was that “all problems related to revolution and construction must be [resolved] independently [i. e., self-reliance], in accordance with the circumstances of one’s own country [i. e., creativity], and mainly through one’s own strength [i. e., self-help].”⁶⁵ Of course, the word *Juche* began to be used widely in 1961, when the mass industrialization of Ri Seunggi’s vinylon succeeded. However, it started to be elevated to an ideology (*sasang* 思想) at this point. Admittedly, the anthropocentric philosophy that humans are the subjects of historical development,⁶⁶ which may be called the central premise of the *Juche* ideology, was still not very apparent. Nevertheless, its early characteristics were clearly present.

It was difficult to imagine North Korea independently mentioning a new socialist ideology besides Marxism-Leninism or Maoism at the time. This was because such an attempt inevitably would have been criticized immediately as a revisionist bias both at home and abroad. Nevertheless, the nation was able to withstand such resistance probably because it was internally full of confidence in defending the *Juche* ideology. One of the bases of this confidence seems to have been the new science pursued by scientific circles following the mass industrialization of Ri Seunggi’s vinylon, especially the *Bonghan* theory, which was seen as representative of that science and a global accomplishment.

As the reasons for this, it is possible, first, to cite the fact that the *Juche* ideology was presented when the *Bonghan* theory reached its apex, wielding a tremendous influence. The early form of the *Juche* ideology was publicly raised for the very first time in the speech that Kim Il-sung made on April 14, 1965 during his visit to Indonesia.⁶⁷ Kim Bonghan and the *gyeongrak* research collective were already at the center of public attention for having systemized the “*gyeongrak* system” and the “*sanal*

⁶⁴ Kim Bonghan, “Guijunghan geoseun sinnyeomida” (cit. n. 39), 5.

⁶⁵ This early form of the *Juche* ideology was publicly expressed for the first time in the speech that Kim Il-sung made during his visit to Indonesia. Its contents were summarized under the term “*Juche* ideology” in Sin Jingyun 신진균, “*Juche sasang*’eun gongsan juujeok jaju jaripui sasangida” 主體思想은 共產主義의 自主, 自立의 思想이다 (The *Juche* Ideology Is an Ideology of Communist Independence and Self-sustenance), *Geunroja* (Oct. 1965), 7-21, etc.

⁶⁶ In *Naneun yeoksai jinrireul bo’atda* 나는 歴史의 眞理를 보았다 (I Have Seen the Truth of History) (Seoul: Hanul, 1999), 160-171, Hwang Jangyeop 黃長燁 testifies that the *Juche* ideology in its completed form was presented for the first time in September 1972.

⁶⁷ The contents of this speech were published immediately as Kim Il-sung, “Joseon minjujuui inmin gonghwaguk eseuui sahoejuui geonseolgwa namjoseon hyeokmyeonge gwanhayeo” 朝鮮民主

theory.” Another reason can be cited: not only did discussions on *Juche* and the new science develop in a close relationship but also the contents of *Juche* closely resembled the characteristics of the new science such as the *Bonghan* theory. There was such a strong analogy between the two fields that the contents completely matched when the “revolution and construction” above were replaced with “science and technology.” Moreover, because the *Bonghan* theory’s success stemmed from North Korea’s fostering of new academic fields and devotion of social support to them, quite unlike in other countries, this theory could become an immense support base for advocating the social system and ideology. In the end, it reaped a tremendous success as self-reliant research among the sciences, which in turn would have made it seem like proof of the scientificity of *Juche* as well. Consequently, what was self-reliant could be seen as more “socialist” and “scientific.”⁶⁸

However, the more deeply the *gyeongrak* theory was studied and the more it came to be structured and to reflect comprehensive contents, the more it triggered a confrontation with existing biological theories and gave rise to diverse contradictions within itself. For example, the theory not only sought to demonstrate the independent existence of the *gyeongrak* system differing from the existing nervous and vascular systems but also claimed that this new system fundamentally oversaw life phenomena. In particular, with its prominent abnormal example, the *sanal* theory inevitably and fiercely clashed against existing cell theory, physiology, genetics, and embryogenetic theory. In addition, the *gyeongrak* theory exhibited many exceptional and discordant cases as it underwent a process of elaboration. Representative examples were claims such as: the *Bonghan* ducts consisted of independent multiple circulatory systems; and the *Bonghan* liquor flowed in the direction opposite of that of blood flow.

In addition, the Soviet Union’s Lysenkoism, which hitherto had dominated biological circles in socialist countries, met with failure starting in 1965 with the death of Nikita Khrushchev, its patron, and the development of genetics in the West. This signifies that, instead of “socialist biology,” which presented the absoluteness of environmental factors, Western genetics, which placed weight on the roles of DNA in genes, finally began to be accepted officially. As a result, it is clear that the *Bonghan* theory, which clashed considerably with Western genetics, likewise and naturally was not free from its repercussions. The fall of Lysenkoism in the Soviet Union activated Western genetics, affecting even the periphery of the socialist bloc. Though it discussed the essence of life in relation with DNA, the *Bonghan* theory differed considerably from Western genetics.

主義人民共和國에서의 社會主義建設과 南朝鮮革命에 對하여 (On the Construction of Socialism in the Democratic People’s Republic of Korea and on the Revolution in South Korea) (Pyongyang: Workers’ Party of Korea Publishing House [朝鮮勞動黨出版社], 1965).

⁶⁸ As for more detailed allusions, see Kim Geun Bae, “‘Ri Seunggi ui gwahak’gwa” (cit. n. 35), 17–24.

The *Bonghan* theory clearly seems to have faced a great crisis from the latter half of 1965 onward. Although Kim Bonghan's fifth paper, "The 'Bonghan Sanal-Cell Cycle' of Blood Cells," was presented in October of the same year,⁶⁹ it failed to gain attention to such an extent that there was no introduction to it whatsoever. It was not that the contents of the study were too meager or that any problem had been pointed out immediately. Nevertheless, this paper only managed to be published in *Korean Medicine*, with little space allotted to it. Apparently, there had been a sudden and considerable retreat in comparison with the fervent support and promotion just a few months earlier.

From 1966, allusions to Kim Bonghan and his research disappeared from official North Korean documents. Furthermore, even the Academy of *Gyeongrak* and the Korean Society of *Gyeongrak* came to be abolished, and both the Minister of Public Health and the Director of the Academy of Medical Sciences, responsible for public health policies and research, came to be replaced.⁷⁰ Soviet medical circles' announcement in 1967 that North Korea's claim to have discovered the reality of *gyeongrak* could not be acknowledged scientifically was an official notification from outside North Korea of the abandonment of the *Bonghan* theory as well.⁷¹ Before this, at the end of 1966, North Korea declared that it would scrap Lysenkoism and develop biology based on genetic theories.⁷² Of course, Kim Bonghan and the *gyeongrak* research collective subsequently disappeared from scientific circles. North Korea completely stopped academic exchange with foreign countries for some time and became closed off and hermitic.⁷³ This, too, would not have been unrelated to the aftereffects of the breakdown of the *Bonghan* theory.

One researcher has viewed the downfall of the *Bonghan* theory as a kind of a political scapegoat of the power struggle that coincidentally swept across the nation

⁶⁹ Academy of *Gyeongrak*, "Hyeolguui 'bonghan sanal-sephowan'" 血球의 '鳳漢산알-細胞環' (The 'Bonghan Sanal-Cell Cycle' of Blood Cells), *Joseon uihak* 12 (1965), 1-6.

⁷⁰ Minister of Public Health Choe Changseok and the Director of the Academy of Medical Sciences Hong Hakgeun, who hitherto had led the support for the Bonghan theory in government and scientific circles, respectively, were replaced categorically.

⁷¹ *Bukhan yeonguso* 北韓研究所 (Institute of North Korean Studies), *Bukhan chongram* 北韓總覽 (A Compendium of North Korea) (Seoul: Institute of North Korean Studies, 1983), 1022. According to the testimony of Kim Mancheol 金萬鐵, a North Korean physician who has defected to the South, East German as well as Soviet scholars visited North Korea at the time and investigated the case of the Bonghan theory.

⁷² Yun Myeongsu 윤명수, *Joseon gwahak gisul baljeonsa (haebanghu pyeon I)* 朝鮮科學技術發展史(解放後篇 1) [The History of the Development of Science and Technology in Korea (Post-Liberation Period 1)] (Pyeongyang: Korea Science and Encyclopedia Publishing House, 1994), 240.

⁷³ For example, out of the countless North Korean science magazines that have been distributed to diverse nations, those published from 1968 to the mid-1970s cannot be found in Western countries such as the United States and Japan at all.

as well. According to him, this research received strong support from the North Korean government as Bak Geumcheol 朴金喆, who had dramatically risen as a member of the ruling elite in the mid-1950s, had his daughter take part in Kim Bonghan's research. As this figure was purged in 1967 due to implication in a political incident, however, the theory supposedly and abruptly met the same fate, too.⁷⁴ However, the rise and fall of the *Bonghan* theory does not exactly match the vicissitudes of Bak as a power holder. As has been examined above, this theory came to be acknowledged later through a far more complex process, or in conjunction with changes in the North Korean system, and, likewise, signs of its downfall were already visible before his overthrow.

When problems arise in North Korea, there is a frequent tendency to resolve them clandestinely rather than openly. Likewise, with the *Bonghan* theory, there is no information whatsoever on when and how the theory was problematized officially, how the final judgment and disposal were performed, and how its leaders were disposed of. As with other problems, this incident, too, was disposed of in such a way that it would be gradually forgotten with the passage of time, unbeknownst to the public.

6. Concluding Remarks

The *Bonghan* theory emerged and spread largely because of factors external to science rather than those internal to it. At this time, empowered by Ri Seunggi's mass industrialization of vinylon, the pursuit of "new science" that was demanded by the North Korean circumstances and would use the nation's own resources, facilities, and workforce came to be advocated, and its interpretation in terms of political ideology and the establishment of *Juche* in all fields were stressed. Consequently, TEAM's exploration of *gyeongrak* surfaced as a kind of a self-reliant, new research field in medicine, and its importance was stressed considerably.

The contents of Kim Bonghan's research were veritably revolutionary, transcending existing achievements in biology and medicine in many ways, far more so than expected. Because North Korea evidently saw his work as an accomplishment more than worthy of receiving the Nobel Prize in the sciences, the highest recognition around the globe, it passionately devoted efforts to the reception of the award. Moreover, this theory was considered to be a feat transcending even Darwin's theory of evolution, stressed in socialist countries as the greatest achievement in the history of

⁷⁴ According to Gong Dongcheol, *Kim Bonghan* (cit. n. 30), 50-51, the information is from an interview with Kim Mancheol. However, the latter figure is unlikely to have been well informed of this. It is because, above all, Kim Mancheol was remote from a social status or a geographical location that would have allowed him to be very knowledgeable of the course of events surrounding the *Bonghan* theory.

science. Because such a scientific discovery had been made in North Korea, still a scientifically backward country that nevertheless placed considerable weight on the field, its impact inevitably would be immense.

The official presentation of the early *Juche* ideology during the latter half of 1965, above all, would have been linked to the rise of the *Bonghan* theory. Empowered considerably by messages extracted from the new science including the *Bonghan* theory, the North Korean regime would have been able to counter criticism, both at home and abroad, that this new ideology had a revisionist bias. Furthermore, scientists and engineers from the field, who were expanding their power, repeatedly grew politically as technocrats, with the *Juche* ideology as their ideological basis, thus even emerging as new partners of the ruling elite. For them, the *Juche* ideology could be seen as having been proven by the great new science, as indubitably scientific and hence socialist.

Indeed, it was imperative that this new science achieve its goals and reap successful results in North Korea. This was because the discipline was considered to be a touchstone demonstrating in advance the success or failure of the newly changing North Korean system. The sciences in North Korean society did not merely remain within limited, professional spheres but its integrated relationship with society at large, or its unification, was stressed. As their position rose, the sciences also had to play the role of very good specimens and weapons better demonstrating the superiority of the system. Efforts for the achievement of major scientific research were not restricted to individual scientists but became a momentous task in which the entire state intervened as a general mobilization system.

Consequently, the downfall of the *Bonghan* theory contributed to the considerable and overall decline of North Korean society. Not only TEAM but also scientific circles were reduced drastically, the leaders were replaced, and even academic exchange with foreign countries was completely suspended. Withdrawing further, the social system lost vitality and was even closed off. Although it is still difficult to state with certainty just how deeply all of these were linked to the *Bonghan* theory, they clearly seem to have been emerging very abruptly, impacted considerably by the failure of this theory.

Several years later, in the early 1970s, North Korea paradoxically witnessed the systematization and full-fledged emergence of “*Juche* science.” Although the *Bonghan* theory had lost its *raison d’être* and value as science, the establishment and ideologization of *Juche*, which had already expanded to all fields of society including political ideology, went on to survive, with its own inertia and vitality. In particular, once North Korean society regained its previous stability, this ideology newly wielded force, now returning to and affecting scientific circles, which had been dormant for a while. It was precisely at this point that Eastern medicine once again gained the strength for its comeback, going on to develop in the direction of further strengthening its independence than before.

Abstract

This article examines the relationship between science and ideology through the case study of *Bonghan* 鳳漢 theory in North Korea. In the 1960s a medical doctor Kim Bonghan reported a theory demonstrating the independent existence of *gyeongrak* 經絡 system which had known as the flowing route of *qi* 氣 in oriental medicine. Some party technocrats picked up and highlighted the theory as a major scientific accomplishment embodying the independent political line which they began to pursue with feverish enthusiasm. With support from the political regime, the theory became well-refined with elaborate and advanced experimental techniques in its methodology. But at the same time it was increasingly stained with political ideology in its content. As the *Bonghan* theory was hailed as “communist science,” it exerted a deep influence on North Korean society: for example, the *Bonghan* theory helped oriental medicine to be established as an academic discipline and also helped the independent political line to develop into *Juche* 主體 thought that had been diverging from orthodox socialism. The *Bonghan* theory soon turned out to be unreasonable as a scientific theory. Nevertheless, its ideological implications continued and spread powerfully with vitality.

Keywords: *Bonghan* theory, oriental medicine, technocrat, *Juche* (self-reliance) thought, North Korea