

The Humanistic Understanding of Kimchi

Compiled by World Institute of Kimchi

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World Institute of Kimchi

the 1990s, the number of people in the UK who are employed in the public sector has increased by 1.5 million, from 2.5 million in 1980 to 4 million in 1995. The public sector has also become an important employer of women, with 5.5 million women employed in the public sector in 1995, compared with 4.5 million in 1980.

There are a number of reasons why the public sector has become an important employer of women. One reason is that the public sector has a high proportion of women in its workforce. In 1995, 88% of the public sector workforce were women, compared with 78% in 1980. This is due to a number of factors, including the fact that the public sector has a high proportion of jobs that are traditionally held by women, such as teaching, nursing, and social work.

Another reason why the public sector has become an important employer of women is that it has a high proportion of jobs that are full-time. In 1995, 68% of the public sector workforce were employed full-time, compared with 58% in 1980. This is due to a number of factors, including the fact that the public sector has a high proportion of jobs that are traditionally held by women, such as teaching, nursing, and social work.

A third reason why the public sector has become an important employer of women is that it has a high proportion of jobs that are well-paid. In 1995, the average salary of a public sector employee was £18,000, compared with £15,000 in 1980. This is due to a number of factors, including the fact that the public sector has a high proportion of jobs that are traditionally held by women, such as teaching, nursing, and social work.

There are a number of other reasons why the public sector has become an important employer of women. One reason is that the public sector has a high proportion of jobs that are secure. In 1995, 88% of the public sector workforce were employed on permanent contracts, compared with 78% in 1980. This is due to a number of factors, including the fact that the public sector has a high proportion of jobs that are traditionally held by women, such as teaching, nursing, and social work.

Another reason why the public sector has become an important employer of women is that it has a high proportion of jobs that are flexible. In 1995, 12% of the public sector workforce were employed on part-time contracts, compared with 8% in 1980. This is due to a number of factors, including the fact that the public sector has a high proportion of jobs that are traditionally held by women, such as teaching, nursing, and social work.

A third reason why the public sector has become an important employer of women is that it has a high proportion of jobs that are well-located. In 1995, 68% of the public sector workforce were employed in the London region, compared with 58% in 1980. This is due to a number of factors, including the fact that the public sector has a high proportion of jobs that are traditionally held by women, such as teaching, nursing, and social work.

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The Humanistic Understanding of Kimchi

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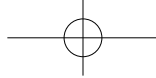
Preface

Humanistic Understanding of Kimchi, the second series on Kimchiology, is now printed by reorganizing what was published and discussed during the second Kimchiology Symposium held in November 2014. This is the second volume published by the World Institute of Kimchi following Kimchiology Series 1 issued 2013.

The first Kimchiology Symposium held by introducing the new academic category of “Kimchiology” in 2013 drew acclaim and acknowledgement from various media outlets as well as academic circles, related industries and general public as Korea’s first full-fledged academic symposium on food humanities which shed light on kimchi and kimchi-making culture from a humanistic perspective.

Humanistic Understanding of Kimchi and Kimchi-making Culture, the first volume of Kimchiology Series, was published as the first step in establishing Kimchiology as an independent academic field. Since the publication of Kimchiology Series 1, there have been requests from academic institutes specializing in food culture studies to use the book as their textbook while many inquiries were made by institutes and the general public on how to obtain the book. My wish is to see studies on various types of kimchi and related culture promoted around the world.

Food is the visual product that embodies national spirit. Although the value of kimchi and kimchi-making culture has been acknowledged worldwide, the globalization of kimchi still has a long way to go. I believe that the bottomless emptiness and helplessness felt while carrying out globalization of kimchi only focused on its physical form can be overcome by incorporating the “soul of kimchi” as the cultural form of history and culture.



The Institute has established Kimchiology by expanding the social science perspective of “kimchi”, which has mostly been studied in the existing area of research and development in natural science. This is why “Kimchiology” can be defined as convergence studies in a true sense. The successful globalization of kimchi and kimchi culture through converged academic research is the very objective pursued by the World Institute of Kimchi.

To that end, the second series has been published following the first volume of last year. In the second series, Humanistic Understanding on Kimch, a wide variety of discussions has been made on kimchi by expanding the humanistic scope of kimchi, which has been limited to East Asia to Europe. The series was planned to expand the humanistic perspective of the academic circle, the media and the general public on kimchi and its culture and to share its value. I wish that our effort triggers active study on kimchi and its culture in various fields.

Finally, I would like to extend my sincere gratitude to those who shared the yearning to establish Kimchiology and the authors who delivered such precious texts for the publication of Humanistic Understanding of Kimchi.

Park, Wansoo
President
World Institute of Kimchi
September 2015

Acknowledgement of Kimchi's value to humanity and the globalization of Kimchi

Lim, Jaehae
Andong National University

1. Cultural sovereignty of Kimchi overcame the power of cheese

“Kimchi ~~~”

‘Kimchi’ is the title of a movie submitted to the 29 Seconds Film Festival. The word ‘Kimchi’ is the only dialogue used in the movie.¹ The movie is about one night, when an old man living in a poor hillside village, (Korean translated into moon village) takes his funeral picture with a disposable camera before a mirror. He says ‘Kimchi~~’ to make a smiling face, but his wrinkled face would not change to a bright smile. His funeral picture shows a hard looking man with his mouth slit open a bit. The movie ends with two big flashes through a window, maybe he was taking more pictures hoping to get a better one?

These days, when people take pictures in Korea, they are asked to say ‘Kimchi~~’. People usually obey the request, and say ‘Kimchi’. Saying ‘Kimchi~~’ has become an idiomatic expression. However, until very recently everyone would said ‘cheese~’, an obvious example of a huge western influence on Korea.

Until as late as in the 1960s, owning a camera was not an item for everyone. Those who carried a camera over their shoulders were either



1_ <Kimchi> directed by Kim Gyeong-rae, Grand Prize winning film of the 1st 29 Seconds Film Festival (<http://www.mh0929.com>)

professional photographers or stylish dandies. It was not uncommon for these ‘highly colorful fellows’ to be strutting the street carrying a camera, and using the conversation starter ‘Would you like to take a picture’ was a well-known cliché for seducing girls.

When only a few people could afford a camera, anyone who had camera was considered a man of wealth and power.² When a photographer asked someone to say ‘cheese~’, everyone obeyed. Even those who had not tasted cheese joined in the choir saying ‘cheese~’.

There was a time when cheese and butter were the symbols of sophistication, and Korean Kimchi and soybean paste products were out of favor. Soybean paste still carries an unpleasant implication. For example, there is a current expression ‘soybean paste girl’, a scornful metaphor for a woman obsessed with only buying brand name items, looking good, and mooching off men. In contrast from soybean paste, Kimchi’s status has greatly improved to the point that it is called ‘Geumchi’ meaning ‘golden vegetable’.

It took half-a century to move from ‘cheese~’ to ‘Kimchi~~’. Interestingly enough, foreigners are aware of Korean’s changed practice. For example, a foreign food specialist began his article on Kimchi for a health magazine with “Koreans say ‘Kimchi’ just as westerners say ‘cheese’ when they take pictures”.³

The fact that ‘Kimchi~~’ has replaced ‘cheese~’ as an idiomatic expression, stands as an example for Korean’s new understanding of Kimchi. In other words, it shows Korean’s awareness of the value of their traditional foods and culture. What caused the decline of ‘cheese~’ and the appearance of ‘Kimchi~~’? There is no particular turning point found in Korea. It seems to have a lot to do with Kimchi’s international recognition. Kimchi has become an important topic for discussion more outside of Korea than inside.



2_ Cameraman is still a man of power. They can be up and down the podium even when solemn ceremony is being held. They are pardoned even when they don’t salute to the national flag.

3_ Joan Raymond, 「World’s Healthiest Foods : Kimchi (Korea)」, www.health.com, “Koreans eat so much of this super-spicy condiment (40 pounds of it per person each year) that natives say ‘kimchi’ instead of ‘cheese’ when getting their pictures taken.” (<http://www.health.com/health/article/O.,20410300,00.html>.)

These international discussions of Kimchi seem to have begun with the well-known “Korean ‘Kimchi’ versus Japanese ‘Kimuchi’ dispute”. Japan was the first to commercialized their version of ‘Kimchi’, pronounced ‘Kimuchi’ in Japan, and attempted to register it as a Japanese original food at the CODEX Alimentarius Commission held in Tokyo in March 1996, while Korea wanted to register ‘Kimchi’ as a Korean original food. The dispute drew wide media coverage under the title ‘Korea-Japan Kimchi disputes’.⁴

As Kimchi emerged as a health food to the world, China began to claim that their Chinese Paochai was the origin of Kimchi. While the origin of something is a matter of importance, the argument over Kimchi’s origins seemed futile because in time the truth will reveal itself.

Japan’s effort to secure vested rights by registering Kimuchi at CODEX as a Japanese original food, and then China’s claim that their Paochai is the origin of Kimchi is actually a beneficial to Korea’s origins to Kimchi. If Kimchi was not an exceptional food, neighboring countries would not come forward arguing their version of Kimchi as the original. The more Japan and China try to promote Kimchi as theirs, Korean Kimchi will be known to more people. There is no need to feel uncomfortable about the international dispute over Kimchi. Here comes the importance of a belief in humanity that is historical truth neither changes nor can it be changed. What matters is not wrestling over who has the right to claim the origins of a food product or in securing a vested right for Kimchi, but in understanding the humanistic value of it and its status in food cultures of the world. When Korea has a world recognized food, it is first and foremost to deliberate on how to introduce it and have more people enjoy it, rather than being trapped in a discourse of ‘I am the origin’ or ‘how to make profit from it’ issues. For Korea, what is needed is an enhancing of a basic understanding of Kimchi and Korea’s Kimchi traditions that transcends these arguments of origin or even in making a profit from Kimchi.



4_ Asakura Toshio, 『Japanese Tsukemono and Korean Kimchi』, 『Humanistic Understanding of Kimchi and Kimjang Culture』, World Institute of Kimchi, 2013, pp135~ 136.

When studying from a humanistic point of view, Kimchi needs to be practical, objective, and realistic. It should be based on the understanding of Korean Kimchi's importance as a food and traditions surrounding it. Otherwise, the studies would be lost in hollow theories churning around Kimchi origins or in historical records. The traditions of Kimchi is not just in old references. It is in Korean's everyday living. Humanistic studies in the library should also come down to modern everyday living, only then will the doors to Korea's Kimchi studies from a humanities perspective will open. It is not just the old literature that is important. What is important is also the fact that Kimchi is no longer an unknown or disliked food internationally. It has emerged as an important health food appreciated by people around the world. If it were not tasty, nutritious, and good for health, it does not matter what is written about Kimchi in historical literature. It would have remained buried as an unknown item.

Just one generation ago, Korean Kimchi was almost non-existent among international society. It was even disliked by Westerners. How did Kimchi make its way onto a world stage in a mere 30 years time as health food. It is worth special attention about how it come to be registered as a world cultural heritage item.

However, it is an urgent issue to analyze the culture and humanistic value of Kimchi as a health food, and how to make it a common asset enjoyed by the people of the world. In this regard, this paper will put emphasis on making Kimchi a food for all people of the world rather than a traditional Korean food.

2. International recognition and globalization of the Korean traditional Kimchi

True to its nature as a health food, Kimchi made its first debut at international sporting events. "Kimchi first introduced to foreigners was at the time of the 1984 LA Olympic Games. It captured the taste buds

of the world.”⁵ It was designated as an official food for the 1986 Seoul Asian Games and for the 1988 Seoul Olympic Games. The athletes of the world enjoyed it. These days, foreign athletes like Kimchi as well, Kimchi regularly appears on the menus at the athletes’ Village Cafeteria at international sporting competitions. However, one writer wrote, “At sports competitions outside Korea, tasteless cabbage mixed with red pepper is served in the name of Kimchi”⁶ This kind of statement often appears in newspapers suggesting that not all countries provide the tastiest of Kimchi.

Just about 30 years ago, Kimchi was disliked. It was not uncommon news to read about Korean students, who were kicked out of school dormitories for making strong scented Kimchi stew. It was as late as the 1980s, after the Asian Games⁷ and the Seoul Olympic Games, that Kimchi was introduced to the world at international sporting events. It is less than 10 years that it became recognized as an excellent health food.

While it is nothing new that Kimchi has become a world food, the sudden popularity of Kimchi is almost unbelievable. For example, Kimchi was always the first food to run out, at the Athens Olympic Games, where Kimchi was designated as an official food. At every meal, there were battles over, which was provided by the Korean National Agricultural Cooperatives Federation, the official Korean Kimchi supplier?⁸

Food is particularly important for athletes who are competing at international sporting events. What they eat is critical to stay physically fit and conditioned for a game. In this regard, the fact that Kimchi enjoyed such explosive popularity proves athletes experienced a positive effect of Kimchi as a health food. At the Incheon Asian Games. held in



5_ IG Yu, ‘Korean Kimchi Crisis’, 『News Maker』 no.602, December 9, 2004.

6_ DW Go, ‘The source of energy, athlete’s cafeteria’, Yeonhap News, September 12, 2014.

7_ SH Gye, SI Yun, ‘Foreign sports players’ preference investigation of the traditional Korean foods’, 『Korean Society of Food Culture』 vol.3 no.1, 1988, p87; HS Choi, 『Korean’s life line, Kimchi』, milal, 1995, p71.

8_ CG Lee, ‘Reporter Lee Chang-gu’s Athens Report ‘Do you understand kimchi taste?’, Seoul Daily, August 17, 2004.

2014, North Korean weightlifter, Kim Eun-joo who is a world record holder and gold medalist said at press conference, “I don’t eat particular health food. Maybe ‘Pyongyang Kimchi’ helped.” Other athletes at the press conference also said, “Kimchi is enough. No need for special health food or expensive foods.”⁹ This greatly impressed people.

It may sound far-fetched to assume that athletes’ preference for Kimchi proves Kimchi is a health food. However, a more objective proof of Kimchi as a health food is what is mentioned in 『Health』, an American health magazine. On the internet edition on March 24, 2006, Kimchi was introduced as one of the top five world health foods, and it solidified Kimchi as a world-renowned health food. The five health foods list were: Korean Kimchi, Indian Lentil, Greek yogurt, Spanish olive oil, and Japanese bean products.¹⁰ The main characteristics of the 5 health foods were that they were vegetable based, mostly bean products, and fermented.

Olive oil is not exclusively Spanish. It is all over the Mediterranean and Middle East including Iran and Turkey. Yogurt as well is not especially a Greek food. It is an everyday item for nomadic tribes. In Mongolia where nomadic stock farming is the main industry, there are several tens of thousands of types of yogurt from watery yogurt to the brick-like hard ones. Indian lentil is also found in Nepal. None of these health foods exclusively belongs to a particular country; they are common foods in many countries.

Natto is usually said to be a Japanese bean product. In the 『Health』 article, four bean products were introduced such as tofu, soybean paste soup, soy sauce, and soybean oil as Japanese foods. However, these four bean products are also found in most East Asian countries. What is more important is the current food culture. All four bean based foods are traditional foods that have been widely enjoyed by Koreans for long time. Of the Five Health Foods, only Kimchi can exclusively be

9_ 『Pyongyang kimchi, the source of power that lifted 164kg』, Gihoilbo, September 29, 2014, p16.

10_ Joan Raymond, 『World’s Healthiest Foods』, www.health.com, March 24, 2006, introduced 5 health foods and their recipes ; Olive oil (Spain), Soy (Japan), Yogurt (Greece), Lentils (India), Kimchi (Korea).

associated with a country that is not found elsewhere in the world. Korea is the country that has both traditional health foods of fresh vegetable fermented food 'Kimchi' and bean based fermented foods.

Previously I stated that the 'who is the origin' argument is not important. However, it has merit because the origin argument may lead to exclusive rights disputes that would involve irrational assertions for staking claims that have to be addressed, but remember that what counts is if it is good now. If the food is not good, its existence would not be appreciated. Anything can have a strong chance to win world recognition, if it is complete and made with creativity. This is why 'who is the origin of olive oil, yogurt, and bean products' is not a worthy subject for discussion.

One important fact is that the countries of the five health foods, Greece, Spain, and India have a long history and strong cultural identity, as does Korea. It is believed that Korean bean-based products came to be known as Japan's to an international society, and there seems to be a room for discussions about Japanese bean products. Japan attempted to register 'Kimuchi' as their food at the Codex, and said Gochujang (red pepper paste) is also from Japan. In this regard, it is believed important for Korea to promote her bean-based products and fermented vegetables as Korean.

Kimchi is a fermented fresh vegetable dish, and it is one of the world's best health foods. It has everything in it to be healthy. Joan Raymond in her article introduced Kimchi as an excellent health food. She describes the benefits of Kimchi as follows:

Kimchi is rich in vitamin A, B, and C. It also contains healthy bacteria lactobacilli that are found in fermented foods. According to recent studies, this health bacterium helps digestion and prevents infection and bacillus proliferation. Better still, several research studies revealed that fermented cabbage has anticancer compounds that deters the growth of cancer cells.¹¹



11_ Joan Raymond, Note 3 update article, Feb. 1, 2008.

The effects of Kimchi have been introduced in further detail by Korean scholars.¹² Fermented fresh vegetables are expected to become a main stream health food, Kimchi is rich in vitamin A, B, and C, with healthy bacteria, which is effective in preventing bacillus proliferation, and contains anticancer compounds. Kimchi is considered to have an excellent chance for globalization.

But the 『Health』 magazine article was written by an individual food specialist, not a researcher by WHO or authoritative medical association. It may not be strongly persuasive. If the mentioned scientific facts are true, it needs verification. The article contains minor imperfections as well. For example, Picture 1 included in the article is not Kimchi but Kimchi beef stir-fry.¹³ Her Picture 2, in an accompanying picture to Kimchi food,¹⁴ a fork is put on the rice with Kimchi beef.¹⁵ Her Kimchi food recipe is far from original Korean Kimchi. Even a Kimchi recipe is not included. However, Kimchi has been written about in many world famous health magazines. As one of the best health foods, these magazine articles have greatly helped to make Kimchi known worldwide.



<Chart 1> Kimchi news picture



<Chart 2> recipe picture

Prior to the article titled, Five World Best Health Foods, the effects of Kimchi as a health food had been proven in China. In 2003, SARS, a strongly infectious disease with a high mortality rate like the recent Ebola virus, broke out in China, and was spreading to neighboring Asian

12_ HJ Lee, 『Kimchi Culture of Korea』, Singwang Publishing Co., 2000, pp117~ 119, Kimchi has various enzymes and beneficial bacillus effective in losing weight, constipation, obesity, diabetes, high blood pressure, anemia, anti-aging, anti-cancer, antioxidative activity, immunity increasing, and others.

13_ Picture caption says 'kimchi-beef'.

14_ The Kimchi recipe linked to 『Health』 is from. Mark Bitman, 『Spicy Beef and Kimchi Stew』, The Best Recipes in the World, 2006(<http://www.myrecipes.com/recipe/spicy-beef-kimchi-stew>).

15_ Food specialists say kimchi goes better with pork than beef. But Mark Bitaman's recipe uses beef.

countries. What made Korea different from other Asian countries, Korea had only a few SARS patients, and all of them were cured. No one died of the illness. Several European presses,¹⁶ not to mention those in China, wrote ‘Koreans eat Kimchi’, and that this was the reason that the Koreans were safe from SARS.

As Kimchi is said to be effective in preventing SARS, many Chinese major super marts were crowded with people wanting to buy Kimchi. For example, there was an unusual scene, where people lined up waiting in front of Korean restaurants to have Kimchi. “As Kimchi is known to be effective in preventing SARS, Kimchi demand increased tremendously, particularly in the SARS stricken countries like Hong Kong, China¹⁷ and Canada”. Kimchi exports sharply increased, especially the export to China recorded an unprecedented 245.1% increase. In other words, SARS contributed to making Kimchi a worldly recognized health food.

Now there is a fear of a spreading Ebola virus. As Kimchi was brought to peoples’ attention at the time of SARS, who knows Ebola might find another cure food. While Kimchi is proven effective in the negative situation of SARS, <DaeJangGeum> it did help to create the Hallyu (the Korean Wave) and promoted Kimchi in a positive mode.

Of numerous foreign TV dramas in China, ‘DaeJangGeum’ (‘Great Jang Geum’, JangGeum was a royal woman physician during the mid-Josen Dynasty period) recorded the highest viewing rate in 2005. As a result, It increased demand for Kimchi, and raised its status. Kimchi came to be engraved as a representative Korean food in the minds of the Chinese people. “Korean Kimchi has been so popular among Chinese people that 41% of Kimchi sales made at the Incheon International Airport in Korea at duty free shops were by Chinese tourists.”¹⁸



16_Yu Shin-mo, ‘No SARS Zone’, Kimchi effect’, The Kyunghyang Shinmun, April 14, 2003. “British daily newspaper Financial Times reported that Koreans’ everyday eating side dish Kimchi is believed effective in restraining SARS.”

17_ MG Jeong, ‘Kimchi, “Thanks SARS”, Kimchi export increased 38.4% this year’, DongA Ilbo, June 18, 2003.

18_ YS Park, ‘“Paochai is the origin”’, China’ endless ambition, claiming paochai is the origin of kimchi. The Korea Herald, November 18, 2013.

(<http://superich.heraldcorp.com/superrich/view.php?ud=20131108000452&sec=01-73-01&jeh=185&pos=>)

However, in recent years, the situation has turned around entirely. China became the biggest exporter of Kimchi to Korea, and Korean Kimchi exports to China has stopped. China began another Northeast Project(that describes Korea's ancient kingdom as China's) claiming it is the origin of Kimchi and Kimchi export to China has systematically been blocked. There are two theories regarding the origin of Kimchi.

One is that 1,500 years ago, Chinese Paochai made in Szechwan was introduced to Korea and it later became Kimchi. Another is when general Xue Rengui (614 ~ 683) of Tang China attacked Goguryo. His soldiers introduced the pickled vegetable from his hometown to Koreans and it became Kimchi. Since these claims suggest Chinese 'Paochai' is the origin of Kimchi, Korean Kimchi is called 'Korean Paochai' in China. The official term 'Kimchi' registered at the CODEX is not used in China. The Szechwan government is planning to make Chinese Paochai one of 'the three Paochais of the world', and equal to Korean Kimchi, and European pickles. China is pushing to increase the quantity Paochai overseas while domestically it has banned the importation of Korean Kimchi by applying domestic quarantine standards that say 'pickled vegetables should have less than 30 colon bacillus per 100g'. This was enforced on Korean Kimchi instead of the general international food standard(Codex Alimentarius).¹⁹ As Kimchi is a slow process fermented food and not a vinegar or artificially preserved food, Korean Kimchi cannot pass the standards. This is why Chinese Kimchi is prevailing in the Korean market, while Korean Kimchi exports to China have been completely stopped.

This situation seems to be presenting an insurmountable barrier for Korea; however, it might one day prove a reversal of opportunity, because it will enhance the competence of Korean Kimchi. In the past, Kimchi was an unfamiliar food in the international society. Even in Korea, it was considered one of the humble everyday side dishes. Not many people thought of Kimchi as a premium item of traditional Korean food.



19_ YS Park, *ibid*.

Kimchi, which was considered an ordinary daily food and under appreciated even among Koreans, has all of a sudden emerged as a hot topic when Japan began selling Kimchi under the Japanese name ‘Kimuchi’ on the international market. They even tried to register ‘Kimuchi’ at the Codex.

Shocked by Japan’s swift movement to commercialize Kimchi in the world market, Korea prepared and submitted a proposal for international standards of Kimchi to the Codex Alimentarius Commission. After intense competition between Japan and Korea, Korean Kimchi has been selected as the international standard at the 24th Codex conference held in Geneva in 2001. Then 10 years later, Kimchi was designated as an Intangible Cultural Heritage by UNESCO. Were it not for the Japanese’s Kimuchi scandal, Korean Kimchi would still have remained unknown among most people in the world. China’s claim to be the origin of Kimchi, and creating an export barrier as well should be seen as an opportunity to be used to the advantage of Korean Kimchi.



<Chart 3> Michelle Obama's tweeter

Recently, First Lady Michelle Obama made Kimchi from her own grown cabbage at the White House, and put pictures on her twitter account along with a Kimchi recipe. It drew attention from the people of the world, especially those who are interested in healthy foods.

Yumi Hogan (She was born in Korea), wife of the newly elected Maryland governor has said in a news press interview, “... the governor’s official residence will have a Kimchi fridge.” Kimchi and Kimchi fridges are getting more popular among Americans. So, what characteristics of Kimchi as a food make it unique in a new world food culture? An answer to this question would be found in the uniqueness of Korea’s food culture.

3. The Characteristics of the Korean food culture and Kimchi as a side dish

One of the most unique features of the Korean food culture is its strict distinction between main food and side dishes. In other words, soup and side dishes are supplementary to the staple bowl of rice. This is the basic structure of Korean meals. Meals with strict separations of staple foods are usually found in countries with agricultural traditions. Countries with traditions of hunting, nomadic life, or livestock farming, and have a meat eating based culture have less distinction between staple foods and side dishes. Each dish can be an independent meal.

Even in agricultural areas, where bread constitutes a staple food, dumplings and noodles made of wheat or bug wheat instead of rice, the side dishes are of less importance. For example, in Andong, Korea, noodles made from wheat are a favorite food to serve to unexpected guests. It is served alone with just soy sauce for seasoning and Kimchi. However, to serve a guest with rice makes a completely different story. A meal with rice means serving your guest with a standard meal soup and a bowl of rice, basic side dishes include a variety of fermented fish and vegetables, grilled or fried fish, thick stews and others, not to mention Kimchi is always served in a Korean household.

From ancient times, prior to the establishment of Old Korea by Dangun (BC 2333), Korea has had a rice based food culture. Whanung(the father of Dangun) set up, what he called ‘a city of god’ and governed it with an idea referred to as ‘the 360 human affairs’, which included governing an agricultural specialties in grains, life, diseases, justice, and others. Of the 360 affairs, maintaining a ‘staple grain’ ²⁰ was at the top of priorities, and arable farming was considered a matter of foremost importance.

In recent years, the oldest ‘rice seed’ was excavated in Soro-ri, Chongwon-gun, and North Chungcheong province²¹ proving Korea’s

20_ 『Samgungnyusa』

21_ TS Park, TJ Lee 『The origin of Korean Rice based on the rice seed excavated from Sonori』,
『A Study on Agricultural History』, vol 3, No.2, Korean Agriculture History Association,
pp119~ 132.

long tradition of farming. Rice, barley, millet, beans, and proso millet are the traditional 'five grains', and they were used to make 'boiled rice'. Boiled rice was without salt, so it needed salty side dishes.

Spicy and salty Kimchi makes an excellent side dish. As it was developed as a supplementary food to go with rice, it cannot be an independent dish alone. In Andong region, side dishes were called 'Gan' meaning 'salty thing' or 'dishes served to go with rice'. In this regard, a study on the development of Kimchi's culture required an understanding of a rice-based food culture, and the importance of the side dish in the food culture.

In Korea, 'to have a meal' is a synonym for 'eating rice'. The idiomatic expression 'to eat rice three times a day' means 'three meals a day'. As rice stands for an entire meal, the Korean expression, "Did you eat rice?" "Let's have rice first and continue working" also means "Did you eat" or "Let's have a meal first..."

Rice holds special significance for Koreans to the extent that "Did you eat rice?" has long been a form of greeting. Rice also symbolizes economic wealth. The expression 'someone can eat a spoonful of boiled rice' refers to 'financially comfortable'. Rice is more than one of the foods; it stands for heaven and the status of life for Koreans.²² There are many expressions suggesting the importance of rice for Koreans. For example, "Rice line is cut" means someone has lost a job, "to let go of a rice spoon" describes someone, who is critically ill waiting for death or someone has passed away.

As rice is the staple food, spoon is the most important eating tool for Koreans. Chopsticks are also used to eat side dishes, but the use of a spoon is more common because it is good for both rice and soup.

While Korean culture has a lot in common with Chinese and Japanese, there are significant differences in the food cultures of the three countries. One of the various differences between them and Korean food culture is Kimchi and a spoon. China and Japan mostly use chopsticks as they eat noodles a lot.²³

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22_ JH Kim, 『Rice – The collection of Kim Ji-ha Stories』, Bundo Book, 1984. He wrote rice is life, compared rice to the heaven.

23_ Noodle is the staple food in northern regions of China above the Yangtze River, south of it rice.

Chinese uses spoons for soup, but not for rice. The Japanese use mostly chopsticks even though their staple food is rice. In Japan, people do not bother to put spoons on the dining table; the chopstick is the only dining tool. They drink soup from a bowl, if necessary using chopsticks for solid ingredients. Fried food, sushi, sushi roll, soba (noodle), the representative Japanese foods are all eaten with chopsticks.

As rice and soup are the main items of Korean foods, a spoon is used more than chopsticks, which are for Kimchi and vegetable side dishes. Kimchi has liquid in it, and both spoon and chopsticks are needed while chopsticks are enough for Japanese 'Dakuan', a pickled radish, and Chinese Paochai, both dry side dishes.

Rice (boiled rice), the staple food for Koreans is cooked without salt, so it needs side dishes containing salt. A spoonful of rice needs to be accompanied by side dishes, they are never eaten separately. Korean foods are not eaten as an independent dish alone regardless of whether or not it is a main dish or side dish. Even porridge and five-grain rice, which are seasoned with salt at the cooking stage, need couple of side dishes.

Not only is the separation and combination of eating main dishes and side dishes, different from other countries', but Chinese and western foods are traditionally served one by one in the order of appetizer, main dish, and desserts. In contrast, Korean food is served all together at once; rice, soup, side dishes, stew, and others. Those eating Korean food should have a spoonful of rice first, then pick some side dishes to their liking. This is the uniqueness of eating Korean foods.

In the regions where rice is the staple food, various side dishes are bound to develop. For example, Korea has developed numerous 'saltiness sources', soybean paste, soy sauce, red pepper paste, various salted fish including shrimp and anchovy, various kinds of Kimchi like radish Kimchi, cabbage Kimchi, green onion Kimchi, water Kimchi etc.²⁴ It can be said Korea has the widest varieties of 'saltiness sources' in the



24_ Korea is the only country who uses salt, soy sauce, bean paste, red pepper paste, various fish sauce, and even kimchi soup for salting.

world. In this regard, it is necessary to look into ‘the saltiness sources’ to understand the Korean food culture.

Salt is the basic saltiness ingredient for Korean foods. Koreans make soybean paste and soy sauce with salt and beans, various pickled fish sauces with shrimp, clams, and other various fish. Spicy and salty red pepper paste is made with a soybean paste with the addition of red pepper, an advanced ‘saltiness source’. It was put on tables mostly for the senior and male members of the family.

Kimchi is a more advanced form of ‘saltiness source’. As it is mixed with various condiments of salt, red pepper, garlic and others, it has both saltiness of soybean paste and a spicy taste of the red pepper paste. As it is a fermented food by lactic acid bacteria, it also has a sweet and sour taste to it. In addition, the crunchy texture of Kimchi is what the soybean paste does not have. Also, the liquid in Kimchi is used to add saltiness to foods or it can be used as a good ‘saltiness source’ alone.

Kimchi is an advanced form of a side dish, more so than soybean-based ones. Being made of various ingredients and condiments, it has a variety of tastes for the tongue’s pallet, and it makes the best side dish in the rice-based food culture.

In the past, the poor could hardly afford to add soybean sauce, red pepper paste, or soybean paste to their Kimchi or pickled vegetables. However, the rich could have Kimchi with a lot of pieces of radishes in it, and also have dried pieces of radish with red pepper condiment. ²⁵

The interviewee in the above said the poor household could not afford even soybean paste. Salt was the only source of saltiness for them. Only those who were financially better off could have Kimchi and ‘dried radish’ mixed with a red pepper condiment. Kimchi and side dishes with generous amounts of a red pepper powder condiment was the subject of envy.

■

25_ Park Chan-hyang (76 years old woman), Gail village of Andong, said in an interview on June 22, 2009. HJ Park, ‘Korean foods vs social status and hierarchical order, based on the example of the foods on the dining table of Dongseong village, Andong’, dissertation for MA degree, Andong University, 2010, p 46.

While salt, red pepper, garlic, and ginger make the basic condiments for Kimchi, numerous other ingredients can be added; for example, garlic chives, green onion, radish, water cress, lyric, dried radish, sesame seed or oil, fish sauce, oyster, squid, various fish, and more. There is almost no limit to Kimchi ingredients. Chestnut and pine nuts can also be a Kimchi ingredients, and they make premium quality Kimchi mixed with spicy, salty, sour, and nut tastes. Depending on the ingredients and condiments, there are numerous kinds of Kimchi from 'Mak Kimchi' (roughly made Kimchi with chopped cabbage and chopped radish mixed with minimum condiments) which is for the lower classes to premium Kimchi for the upper classes or to be served on the guest table.

Soybean paste, soy sauce, and red pepper paste were served without discriminating by social status or hierarchical order in a family. There were cases that some upper class people made special soy sauce and soybean paste for ancestral rites, however, the general practice was all families shared the same soy sauce or soybean paste. However, as for Kimchi, different kinds of Kimchi were served depending on social status, young or old, and male or female.

The lower classes usually eat 'coarse Kimchi' made of chopped radish and the outer cabbage leaves mixed with a minimum of condiments. It was often served right out of the jar. Being made with coarse ingredients and simple condiments, it probably did not look nice in a bowl with roughly ground red pepper sparsely sprinkled here and there on the main ingredients.

However, seniors, guests, and the upper classes were served neatly cut, red, good quality crunchy cabbage Kimchi or wrapped Kimchi. The Kimchi was made with plump solid good quality cabbage and rich condiments.

Now, that the social status system has been removed and various Kimchi ingredients are readily available, such Kimchi discrimination has almost disappeared.

4. Variety of Kimchi, prospect for new food culture

Kimchi is made of various seasonal vegetables. As every season grows different vegetables, different kinds of Kimchi can be made all through the year. In spring, people make ‘Nabak Kimchi’ (radish water Kimchi) with young radish pieces. It is the time cabbage seeds began making buds. From late spring, people begin making young radish Kimchi ²⁶ and it continues through to autumn. From early summer through autumn, it is the time for leek Kimchi, stuffed cucumber Kimchi, and radish Kimchi.

Besides the above varieties of Kimchi, there are other various seasonal vegetables and wild edible greens that make excellent Kimchi ingredients. For example, iris, aralias, green onion, eggplant, leaf mustard, balloon flower, sesame leaf, dried radish, pepper, Korean lettuce, and others. People can make a variety of Kimchi versions any time of the year as they need. Additionally, spring to autumn Kimchi recipes are be eaten quickly, Kimjang Kimchi (winter cabbage Kimchi, water radish Kimchi and others) are made in large quantities and last for a long time using a method of preservation. Kimjang Kimchi is made of autumn radishes and cabbage harvested late in autumn for the winter and last until early spring. Thanks to the development of the refrigerator, low temperature storage became possible, and winter cabbage Kimchi has been made available all through the year.

Different from various seasonal Kimchi, Kimjang Kimchi (winter Kimchi) is made of vegetables from all four seasons, The main ingredients, cabbage and radishes, are autumn vegetables that grow from late summer to autumn. Red pepper is a summer vegetable grown from spring through autumn. Garlic is a winter product planted in the previous autumn, and has survived through winter to be harvested in summer. While Kimjang Kimchi is basically a winter food, preserved is done by keeping the Kimchi at low temperatures and through a low temperature



26_ Young radish has short growth period and it can be planted anytime from spring through autumn. Therefore young radish kimchi is available four seasons of the year.

fermentation process. Traditional Kimjang Kimchi can be said to be a wholesome fermented food having all four seasons in it.

There was a time, when there were no green houses to cultivate vegetables, and only dried vegetables like eggplant, zucchini, radish, wild edible greens, and radish greens, no fresh vegetables, were available out of season. Kimjang Kimchi was the source of fresh vegetables (radish and cabbage) to get through winter until spring. Kimchi was the food that overcame the restrictions of seasons. In addition, various fish sauce, oyster, and fish put in Kimchi were the source of quality protein and calcium. In this regard, Kimjang Kimchi, fermented fresh vegetable made of various ingredients for wintering, can be said to be a comprehensive nutritional health food.

Another merit of Kimchi is it is a preserved food like Jang (soybean-based saltiness: soybean paste, soy sauce, red pepper paste). As it requires low temperature fermentation and low temperature preservation, Kimjang Kimchi was only for winter up to early spring. Development of the refrigerator and more specifically the Kimchi fridge, changed the whole picture regarding Kimchi. These days people can enjoy Kimchi in all seasons of the year. Another important feature of Kimchi is that people can eat it without any additional cooking.

Doenjang (soybean paste) and Ganjang (soy sauce) are not to be put on the dining table on their own.²⁷ Doenjang is mostly used to make soup with other ingredients and Ganjang is served with various condiments added. Except for special cases, Doenjang is not served alone, neither is Ganjang except for on the table at ancestral services. Kimchi, however, can be eaten right away from jar or fridge to the table no additional cooking process and no additional condiments are needed. A bowl of Kimchi makes an excellent and quick side dish.

While Doenjang needs a long time to ferment, short-term fermented Kimchi can make for a tasty Kimchi as well. Depending on what

27_ Of the Korean sauces, red pepper can be served right out of the jar, mostly to have fresh vegetables with like garlic, carrot, cucumber, green pepper and others or for bibimbap (rice, vegetables mixed in red pepper paste).

ingredients are used in the Kimchi, the fermentation period varies. At a minimum, it takes about one hour of salting or brining the cabbage or radishes, and then mixing them with various seasonings including chili powder to make Geotjeori (fresh Kimchi), which is for an instant Kimchi or you can take a couple of days before eating it. Fresh Napa cabbage salad dressed with garlic and chili powder is also possible.

Mugeunji (ripe Kimchi) is a long period fermented Kimchi. For a long period fermentation, you should use a less full and solid textured Napa cabbage with more green outer leaves. More salt is used compared to the summer Kimchi. This Kimchi recipe is as follows: after salting (brining) and rinsing, apply your favorite mixed condiments with various ingredients to the cabbage, wrap it with the outer leaves of cabbage, put it in a jar that will be buried underground, put more outer leaves at the top of the jar to help seal the edges, sprinkle some coarse salt over it before placing in an air-tight lid on top to seal it. The Kimchi jar is to be opened after 6 months of low temperature fermentation, the longer fermentation process makes for a deeper tasting Kimchi. It was the way for Koreans to have vegetables in winter when refrigerators were not available.

While Geotjeori Kimchi can be eaten right away, Mugeunji has to have a long period of fermentation, and can be eaten for years after the basic 6-months fermentation period. Geotjeori is more or less a salad. It is not a true Kimchi, because while it requires the entire Kimchi making process, salting, mixing with condiments, the most important ‘fermentation’ process, which differentiates Kimchi from all others is skipped.

The most distinctive feature of Kimchi is its low temperature fermentation process. While Kimjang Kimchi is made in the autumn, Mugeunji can be considered the standard of Kimchi varieties. The most distinctive feature of Kimchi is its long period of fermentation. Because of the fermentation process, even as much as three years long in the case of Mugeunji Kimchi,²⁸ it can still be served as a special delicacy. Failing to focus on the fermentation process, may lead to a misunderstanding

of what Kimchi is to the Korean, versus the same with the vegetable pickles of China and Japan.

Kimchi has both salty and hot pepper tastes, but it is not as salty as the condiments used in it, Doenjang or Ganjang. A country's Food culture is often reflected in its language. For example, the Korean expression 'maepjjan', meaning Kimchi is salty and spicy, also refers to an outstanding person or a person who is thorough in his work.²⁹

The slightly salty and spicy taste of Kimchi is an appropriate food in a food culture that clearly divides main food dishes from side dishes. The condiments Doenjang, Ganjang and Gochujang (red pepper paste) are used with food year around, and they have do not discriminate in identifying social status, and also they are without much variety. However, Kimchi is different. There are numerous kinds of Kimchi that do contribute to identifying social status, and there are different types of Kimchi that were served during each season making many types of Kimchi seasonal. Besides, there are also many various kinds of Kimchi that can be served simply like a side salad, for example radish Kimchi, Napa cabbage Kimchi, green onion Kimchi, dried radish Kimchi, and water Kimchi can make for a reasonable, yet traditional, dining table setting.

The salty and hot tastes of Kimchi go well with almost any food. In addition to rice, it is an excellent side dish for noodles and porridges, the other staple foods for Koreans. Ramen is already seasoned with salt and needs no side dish. However, it is best if it is accompanied by Kimchi. Ddeok (rice cake) is also a favorite food for Koreans. Kimchi is such an important side dish that there is an old saying "A man drinks Kimchi soup first when no one is thinking of giving him a rice cake."

Among the various side dishes, Kimchi is the one that can be made into an independent dish. While salty the condiments Doenjang, Ganjang, Gochujang cannot be eaten as an independent side dish on their own, however the slightly salty taste of Kimchi can be an independent food.



28_ DH Go. al., 『Korean Cultural Genetic Map』, Storyhouse, 2013, p70.

29_ JH Lim, 『Tradition and Creativity of the Andong Culture』, Minsokwon, 2010. p14.

Especially Baek Kimchi (white Kimchi with bland taste) and Dongchimi (water Kimchi), both are fresh and bland tasting, would be good to recommend to foreigners who are unfamiliar with Kimchi.

What is more important is Kimchi can be made with any kind of vegetables. To think Napa cabbage Kimchi is the only Kimchi is like saying grape wine is the only wine. Just as any fruit can be made into a wine, any vegetable can be made into Kimchi, and there are over 100 kinds of Kimchi. Besides the numerous kinds of Kimchi, Kimchi-based foods are limitless. It is suggest that Kimchi has a limitless opportunity for further expansion in the world.

5. Searching for the root of the term ‘Kimchi’ from ‘Jjanji and Jimchi’

Historically, the term ‘Kimchi’ went through many changes thus it is hard to trace its origins. In old references, Kimchi was referred to with the Chinese characters ‘jeo’(菹 or 菹), which means pickled and fermented foods. The Chinese ‘hye’(醢) or ‘sikhye(食醢),³⁰ which means made of fish and clams mixed with radishes, are also fermented foods. However as their main ingredients are fish and clams, this would exclude it from the category of ‘Kimchi’. Using Fish and clam sikhye would make it an intermediate food.

In the 『*Hunmongjahoe*』(“collection of Chinese Characters for Teaching Children”, 1527), the Chinese character ‘Jeo’(菹) is used together with ‘jeo’(菹) to refer to Kimchi, which in Korean at the time was called ‘Dimchae’. It is believed that due to palatalization Dimchae could have been pronounced ‘Jimchae’ in some areas of Korea. In the book, 『*EumsikDimibang*』, Kimchi is referred to as ‘timchae’ in



30_ HJ Lee, 『Kimchi Culture of Korea』, Singwang Publisher, 2000, p22.

it's Chinese character³¹, which due to palatalization would have been pronounced 'chimchae' in Korean.³² In other words, it is believed that Dimchae, timchae, and chimchae had changed to Jimchae, and then finally to Kimchi.

However, what does Dimchae or timchae truly means is not clear, and tracing the root of the term 'Kimchi' is has been unsuccessful. This is the reason why the study of Kimchi's origins needs to break from relying too much on just old written references and turn scholars attention to the spoken language in everyday life. Old terms are often found intact in everyday spoken language as is in regional dialects.

Just as the old word 'gocho' is still used for red pepper in some regions of Korea, Kimchi was referred to in various old terms, such as 'Jimchi', 'Jjanji' or 'Mugeunji'. Jimchi is believed to be a dialect that originated from 'Dimchae' and 'Jimchae', however, the opposite is believed possible that Jimchi changed to Jimchae and Dimchae. Regional dialects carry its history. This is why dialects are more than a matter of geographical difference. In Andong, Kimchi is called 'jjanji', water Kimchi 'Jimchi'. Analysis on the terms would reveal a clue to the origins of the term Kimchi.

The standard language in Andong changes 'Kimchi/Mulkimchi (water Kimchi)' to 'jjanji/Jimchi'. While the standard language puts water Kimchi in the same category of Kimchi, Andong's dialect of 'jjanji/Jimchi' are considered two separate things, because 'jjanji'(Kimchi) means 'ji'(漬), salty vegetable pickles, while Jimchi 'water Kimchi' is a kind of Kimchi. Over time other regions clarified the difference by using the term 'Mul kimchi'(water Kimchi). This is how Kimchi originated. The term Jimchi can be said to from Jjanji. In this regard, it seems logical to trace the origin of the term Kimchi in 'jjanji'.

31_ A woman of Andong Jang family, 『Umsikdimibang』 (Yeongyang-gun, 2007), p 239.

* The book title is written in old Korean alphabet.

32_ CL Park, 『Roots of Joseon Dynasty Kimchi』, p322. An analysis on the Joseon dynasty Kimchi – related references suggests the Chinese characters chimchae are believed used for 'dimchae' to refer to the ordinary kimchi for common people.

In Andong, ‘jjangajji’, which in standard language means salty vegetable pickles, is called ‘ji’. Ji is made with radishes, green peppers, zucchini, eggplant, cucumbers, and other vegetables. The vegetables are either brined or dried in the air, and then put in Doenjang(soybean paste) or Gochujang (red pepper paste). Andong’s ‘ji’ is more salty and drier than Seoul’s. Andong’s ‘ji’ is likely to be the term that is originated from the old Kimchi ‘ji’(漬) or ‘jangajji’ together with South Jeolla province’s Mugeunji (old ripe Kimchi), The salty fermented Jjanji is different from jangajji, which uses the condiments Doenjang, Ganjang or Gochujang as a main ingredient.³³

In Andong, Jimchi refers to all kinds of water Kimchi, including ‘Nabak Kimchi’ (radish water Kimchi) and ‘Dongchimi’ (winter radish water Kimchi). that are to have fresh Kimchi soup. While Jjanji is dry and served on a dish, Jimchi should be served in a bowl and a spoon is needed to serve it. After considering old Korean references, the Chinese word ‘chimchae’(沈菜) is believed to have originated from ‘Jimchi’, and chimchae refers to the pickled and seasoned vegetables served in water.

Therefore, while water Kimchi can be called ‘chimchae’ (‘vegetables soaked in water’), to call Kimchi (jjanji) which is not soaked in water ‘chimchae’ is not right. Considering the standard use of language, Kimchi and Mulkimchi (water Kimchi) and the Andong dialect jjanji and Jimchi, the origins of Kimchi can be traced to the native terms jjanji and Mugeunji, because in old literature Kimchi is referred to in the Chinese characters ji(漬) or jeo(菹).

In old references, Kimchi is mostly written in the Chinese character jeo (菹) and later on ‘chimchae’ appears randomly in literature.³⁴ It is believed the Korean word ji is written 菹 in Chinese characters, and



33_ Interestingly enough, Song Wha-seop presented the same opinion at the 2nd Kimchiology Symposium, held on November 26, 2014 under the theme “Humanistic Understanding of Kimchiology” at the National Library of Korea. 『Collection of papers presented at the 2nd Kimchiology Symposium』, pp136~137.

34_ CL Park, *ibid*, p321. “...the term ‘chimchae’ is used only about 12% in the old references.”

Dimchae or Jimchi as 沈菜. Given this, Dimchae and Jimchi are believed to have originated from 'ji'. Salty 'ji' would have been called jjanji and old 'ji' Mugeunji.

Mulgimchi is a derivative from the term Kimchi. Jjanji (Kimchi) is presumed to have first been used, then became jinji (water Kimchi), which later was changed to Jimchi. The assumption is possible because physical objects preceded the words, not the other way around. This is why the order of Kimchi – mulgimchi applies to 'jjanji- Jimchi'.

Kimchi in Seoul, where the standard use of 'Kimchi' is used refers to a watery version of the dish. The dialect is not jjanji, but Jimchi. In other words, the watery term 'ji' is also used in the same way as in Andong. The Andong dialect jjanji and Jimchi are the terms referring to two different types of Kimchi, jjanji without water, Jimchi with water. It is presumed that the salty without water 'ji' was made first, then came 'jinji', which is watery and less salty than Kimchi, and the term went through changes to jinchi and finally to Jimchi.

Therefore, 'jjanji/Jimchi' rather than 'Kimchi/Mulkimchi' are believed to be better explanations than the historical changes of Kimchi. The idea is to follow the language as the various versions of Kimchi developed. This seems to be a better sequence of historical investigation, because jjanji was first made the language followed, then came Jimchi, which was called chimchae 'vegetable soaked in water.'³⁵ Basic, 'Ji' is pickled and a fermented vegetable, and then jjangajji was made (jjanji means put in soybean paste or red pepper paste, or soy sauce), followed by jjanji, and then jinji (Jimchi, Kimchi). All language sequences are believed to come from 'ji'.

The above supposition is supported by the studies on the names of Kimchi in Jeolla province. Fieldwork was done in Jeonju on Kimchi names and it was found that various kinds of Kimchi were called 'ji' or 'Jimchi', which later changed to Kimchi. Of the 35 Kimchi names, 23



35_ HJ Lee, *ibid*, p 23. "Ji is kimchi from ancient times, chimchae seems to refer kimchi that appeared since various vegetables began to be cultivated."

kinds were called 'ji' 'Jimchi'. Jimchi was historically an exclusive term referring to cabbage Kimchi.

Cabbage Kimchi was called Baechuji, Jimchi, and Ji; white Kimchi was called baekji; dongchimi, singgeonji or dongchimji; nabak Kimchi, nabakji; green onion Kimchi, paji; young radish Kimchi, yeolmuji; pepper Kimchi gochuji; Korean lettuce Kimchi, godeulbbagiji; radish Kimchi, musiji or muji; water cress Kimchi, minaliji.³⁶ Only some special kinds of Kimchi didn't have names with the letter 'ji', for example geojeoli (fresh Kimchi), silpa Kimchi (small green onion Kimchi), ggaetip Kimchi (sesame leaf Kimchi), which confirms the once local dialect 'ji' and 'Jimchi' were replaced by the standard language Kimchi³⁷. The name of garlic chives Kimchi went through changes from 'solji' to 'sol Kimchi', then to 'chive Kimchi' is another obvious example.

The tradition of the salted and fermented vegetable 'ji' that has been carried down from ancient times remains in the names of jjanggajji, jjanji, Mugeunji, baechuji (Napa cabbage ji), yeolmuji (young radish ji), gochuji (pepper ji), singgeonji (lightly-salted ji), dried radish jjanji and others. In Andong, dried radish Kimchi is called 'gonjjanji'. It is also present in Yecheon and Sangju 'goljjanji',³⁸ Gimcheon 'ogulakji', Cheongsong 'jjogulakji'. Kimchi is also called 'gonji', 'golgeumjjanji' in other regions, all having 'ji' or 'jjanji' in the names. This is because the dried radish Kimchi is dry, and it is called jjanji, therefore it cannot be called Jimchi. However, there is no such word like 'gonKimchi', 'golKimchi', or 'golgeumKimchi'

The origin of the term Kimchi can be traced back to Dimchae or timchae, which was found in old literatures. However, tracing the origin stops at this assumption as the meaning of the terms are not known. Another assumption is that 'Kimchi' originated from 'Chimchae' (soaked



36_ SJ Jo, 'Kimchi and Cultural Knowledge : Jeolla-do kimchi names and classification from the perspective of the cognitive anthropology', 『Korean Cultural Anthropology』 vol. 40. no. 1, Korea Cultural Anthropology Association, 2007, pp 87~ 91.

37_ SJ Jo, ibid, p107.

38_ In the 1970s, dried radish was one of the most common side dishes.

in water) in Chinese characters. Chimchae refers to watery Kimchi, it is not jjanji. Not only in terms of recipe but also in terms of where it was served. Chimchae is far different from jjanji. Old books on customary formalities wrote ‘Chimchae’ was served at various ceremonies.³⁹

Actually, Jimchi (water Kimchi), not jjanji (Kimchi), is put on the ancestral rite table, because souls are believed to hate the color red or chilly tasting foods. Jjanji mixed with red pepper is considered not proper to be on ritual tables. Only white Kimchi, water Kimchi, and nabak Kimchi (water Kimchi made of sliced radishes) are served on the ritual table. While jjangji and jangajji are everyday side dishes, Jimchi (water Kimchi) has a ceremonial function, which is served to guests or at the celebrations.

Kimchi/Mulkimchi confines Mulkimchi (water Kimchi) to a category of Kimchi while ‘jjanji/Jimchi’ are coordinative terms with independent functions as side dishes. Jimchi (water Kimchi) appeared later than jjanji (Kimchi), but it deserves to be considered an independent dish for its uniqueness. When rice is served, it is to be accompanied by soup and side dishes. The dish jjanji constitutes one of the side dishes, Jimchi as a soup. While soybean paste and jjanji are basic side dishes, which provide saltiness, however Jimchi. and soup are supplementary foods that helps make the eating of rice more smooth. It represents an upgraded version of the Korean table arrangement that is proper for the elderly, guest tables, and party tables.

In this regard, the Korean proverb “to drink Kimchi soup, when no one is thinking to give him a rice cake’, which is similar to the English proverb of not ‘to count one’s chickens before they are hatched’. However, it is suggest that the proverb needs to be interpreted to mean “to drink Water Kimchi soup...” because Kimchi has little water and cannot be classified as a soup and is also too salty to drink. In addition, the fact that both rice cakes and Water Kimchi are special foods for feasts or rituals is another supporting piece of evidence for the need of a

39_ CL Park, *ibid*, p322. “The term ‘chimchae’ refers to ceremonial foods and was mostly used in the books on ceremonies strongly support the hypothesis that chimchae would be the origin of kimchi.”

new interpretation of the proverb. This is an example of how telling and using proverbs or old sayings can carry old terms intact, and they often offer a clue to understanding the old culture.

In other words, ‘Kimchi/Mulkimchi (water Kimchi)’, ‘jjanji/jimchi’ are two separate entities with different meanings and uses. They are as different as rice is different from soup. In this regard, it is not proper to call Jimchi, as Water Kimchi or as if it is some kind of Kimchi. In addition, Kimchi can be cooked to make various stews, while Water Kimchi is served only uncooked as it is. Therefore, to subordinate water Kimchi to Kimchi lacks logical matching.

Studies on the origin or names of foods, should not stop at a mechanic enumeration of chronological orders of events. Unless they produce a new meaningful interpretation, as to the understanding of the current food culture, otherwise it would only be a worn-out repetition of historical facts. It is believed not right to say the Chinese character 菹 means ‘salt pickled’, and that 沈菜 ‘vegetables soaked in water’ explains the identity of Kimchi or to say China is the origin of Kimchi. In this regard, the origin of Kimchi and the identity of Kimchi as a side dish should be found in local and old languages, such as ‘jjanji’ and ‘Jimchi’, rather than from Chinese characters or modern everyday life standard language taught in schools.

6. Humanistic values of Kimchi

Foods can be evaluated based on the three aspects; taste; nutrition, and function. However, if one more value was to be added, preservation would be the fourth. It is because no matter how nutritious and tasty a food maybe, if it cannot be preserved then any kind of modern convince between the time it is made to the time it is eaten will be lost. Kimjang Kimchi is a good example of showing the value of preservation. It can be preserved for months, even for years. This type of Kimchi is called Mugeunji (old Kimchi). The question of low temperature preservation has been solved thanks to the development of the Kimchi fridge. Kimchi is a complete food rich in nutrition, tastes great, and has a long preservation period.

A lot of research has been done on nutrition and the taste of Kimchi. In this presentation, the focus will be on the values of Kimchi. The characteristics of Kimchi can be summarized in the following five points. First, its complementariness as a complementary side dish to other staple foods. Second, Kimchi is highly diverse and can be innovatively used. Third, it respects harmony and independence. Fourth, Kimchi's low temperature preservation process. Fifth and lastly, Kimchi's harmony among its various ingredients makes it a successful dish among epicures worldwide. From a humanities perspective, these five aspects of Kimchi present several interesting subjects for research.

First complementariness. Food dishes can be divided into two categories, a main dish (usually a staple food) or a side dish. Kimchi is a side dish; particularly in the regions of Korea where rice is the staple food. A meal without soy sauce or soybean paste might be possible, but not without Kimchi.

While water Kimchi can be an independent food, Kimchi is not eaten alone. With its salty and spicy taste combined with the crunchy texture of fresh Napa cabbage, Kimchi makes an excellent side dish for boiled rice, noodles, or ramen.

As a side dish to main dishes made from staple foods, Kimchi can be said that it is a complementary food. It is neither independent nor overpowering in its taste. It complements or enhances eating the staple foods of boiled rice, porridge, noodles, and others. However, this does not mean that Kimchi lose its unique salty, spicy, sour, and crunchy taste and texture identity.

It simply supplements what is lacking in the staple food. It provides balance to the taste of rice, saltiness to fiber, and is a source of vegetables to accompany meats and fresh vegetable main dishes. Likewise, Kimchi is a complementary and harmonious food that upgrades the taste and nutrients of other cuisine.

As all things have both merits and demerits, so do foods. No food is perfect alone. As all beings are interdependent with others, Kimchi is a representative example of interdependence. Having variations of these elements in it, it can be said Kimchi is a perfect food alone. As being a side dish to accompany staple food, it does not over power other foods. Such a function resembles the founding philosophy of Korea, a 'humanitarian ideal' of being dedicated to helping others and benefiting the world.' ⁴⁰

Second is Kimchi's diversity. If Kimchi culture is to be summarized in one word, it would be 'diversity'. Like wine, Kimchi is synchronically and diachronically diverse. Numerous kinds of Kimchi can be made with numerous ingredients on the one hand, on the other it is depending on the fermentation process and time. Kimchi has varying depths of tastes and varieties from fresh Napa cabbage Kimchi to old Kimchi. Who makes it, how it is served, constitute its diversity. Kimchi master Lee Ha-yeon said, "It is said there are as many kinds of Kimchi, just as there are any number of mothers." ⁴¹ The way it is served also varies. Kimchi, made with cabbage, can be served neatly cut or arranged as a whole



40_ JH Lim, "Continuation of Humanitarianism and Humanitarian man in Folk Culture of Korea", 『Humanitarian Ideal and Superiority of Humanitarian Thoughts』, 31st National Foundation Day Commemoration Conference (Oct. 1, National Palace Museum of Korea), pp 61~ 65.
Altruism in the Humanitarian Ideal has been dealt with in detail.

41_ DH Go. al., ibid, p69.

head. “To have a spoonful of cold rice with a piece of Kimchi shredded long by hand on it is awfully delicious.”⁴² Radish Kimchi as well can be served in many ways. To have a bite of a whole radish gives a different experience to eaters from eating the cubed radish Kimchi. While Kimchi provides a different experience by who made it, as well as by how it is served, Kimchi is also diverse in its ingredients and condiments.

There are more than 100 kinds of Kimchi. Even with the same ingredients, depending on what kind and what amount of condiments was used, varying tastes of Kimchi can be made. Same kind of Kimchi can be diverse too depending on if it is made to be more salty, less salty, more spicy, less spicy, the temperature of its fermentation process and length, by the amount of water used, and others. Standardization of Kimchi has constantly been an issue among food specialists, however there is a danger it might fall into a single and standardized recipe as with many western cuisines. It would not help to convey the diversity of Kimchi and Korea’s culture. It is desired that the principle of diversity be respected, in terms of ingredients, tastes, and the varying degrees of fermentation, when Kimchi is commercialized at international markets.

Diversity is a byproduct of creativity, democracy, and innovation. Understanding the importance of cultural diversity, Korea has derived an international convention on cultural diversity. Korea is actively engaged in pursuing diversity because diversity encourages creativity, cultural democracy, and opens the possibilities for change and progress. Protection of biological diversity is also to maintain a healthy ecological system and secure sustainability of the ecosystems of the earth. Acknowledging diversity enables us to sustain what it already is and to create new things that are needed. In this way, diversity breaks away from fixed ideas and challenges them, and invigorates innovation in pursuing new values. An attempt for the standardization of Kimchi taste with a one page recipe might be useful for food science or standardization of a commercial product of Kimchi. However, from



42_ Bread cut by knife and broke by hand are said to have different taste is comparatively smaller than kimchi cut with knife and shredded by the hand.

a humanistic perspective, it is not advisable because diversity of the Kimchi culture does represent humanistic values.

Third is balance and independence. In terms of ingredients, condiments, varying degrees of fermentation, and others, Kimchi is an excellent example of diversity. It is also a basic ingredient for numerous other menus, such as the Kimchi pancake, Kimchi stew, tofu with stir-fried Kimchi, Kimchi and rice dried seaweed roll, Kimchi fried rice, Ddeokboki (stir-fried Kimchi and rice cake), Kimchi ramen, Kimchi sushi, Kimchi hamburger and others. While Kimchi is a fermented or fresh vegetable dish, if it is cooked with other ingredients it can create limitless kinds of tasty dishes.

Kimchi stew's diversity alone is extensive. Kimchi can make tasty stews with almost anything, be it meat, fish, shellfish, or other. Whatever supplementary ingredients it may have, Kimchi does not lose its identity in the stew. From the point of humanity, it is an example of the values of balance and independence, which constitute another feature of Kimchi besides its diversity.

This humanistic value of Kimchi is worthy enough to be treasured, but strictly upholding the traditional Kimchi to originality will not necessarily help the globalization of Kimchi. Kimchi needs to be acknowledged by other countries as a traditional food. and if possible it should be blend with them. It would mean a creation of a new Kimchi menu in the countries concerned. This will make globalization of Kimchi and realize the value of Kimchi's balance and independence.

When Kimchi goes to Japan it needs to become Japanese Kimuchi to accompany Japanese sushi. If it went to China, it needs to be Chinese Kimchi that is harmonious with Chinese dumpling, in America it should make a happy combination with a hamburger. This type of globalization does not mean Korean Kimchi's originality is lost. It is the opposite. When Kimchi is served with other countries' foods, its originality stands out more. Stubbornly adhering to the old Kimchi tradition denies the very characteristics of Kimchi, being harmonious with any food. By not making these combinations, it denies the very characteristics of

Kimchi as being harmonious with any food, limits Kimchi's diversity, and the limitless possibilities for the creation of new Kimchi menus. "This is another point for starting the globalization of Kimchi's cultural" perspective that is believed needed.

Fourth value is Kimchi's long preservation process. Of numerous foods, Kimchi is almost the only dish that has a low temperature fermentation process, and along preservation period that provides vegetables throughout the winter. This low temperature fermentation process for vegetables used to be kept in jars buried underground during the winter for the low temperature preservation.

Kimjang Kimchi is made so that vegetables will be available during the winter months. The Korean expression for Kimchi making 'Damgda' suggests a certain period of fermentation and long preservation. The same process is used for soy sauce, soybean paste, and alcoholic beverages. Kimjang Kimchi, or Mugeunji is considered special because it is the product of fermentation and has long preservation period.

The Kimchi fridge is not an accidental technological development. It is the product of the Kimchi culture. The Kimchi fridge was developed by Koreans. It was the number one item Korean homemakers wanted to have and is a big money maker that pulled the electronics market through the IMF financial crisis in 1997-1998.

The Kimchi fridge has a very different system from the ordinary refrigerator. Fine temperature control at 0.1°C is possible. It is equipped with automatic adjustment for optimum levels for fermentation, ripening, and preservation that the ordinary refrigerator with a cold air circulating system does not have. The Kimchi fridge is a new concept refrigerator. It keeps temperatures low on all four sides of its tank. Vegetables, fruits, fish, meat that may go dry in the ordinary fridge can be kept fresh for long periods of time, and it is also called a 'live storage fridge'.

From a humanistic understanding of the fermentation of Kimchi, we can find that it resembles a way of character building of human beings. It is not a short period high temperature fermentation, but a low temperature long period process that is the same with how human

beings' maturity is achieved.

If natural science is the study of 'invention', social science is 'discovery', then the humanities is the study of 'fermentation'. It is because natural science develops technology, and social sciences discover social phenomena, that we can say that the humanities changes humanistic values into a thought system, which resembles fermentation. Fermentation of humanities is like yeast or fermented soybean lump, self maturity is achieved after a long period of inner changes. It does not stop at one individual. It spreads to society. Humanities are like Kimchi's low temperature long period fermentation process. It does not stand out. It is the study of enlightenment and insight that is to be shared by all humankind.

Fifth is harmony. In terms of taste, Kimchi is an example of harmony between salty, spicy, sour, and sweet tastes, which are all harmonious in Kimchi. It is harmonious as well in terms of ingredients and color. Various Kimchi ingredients have their respective characteristics and colors, when they are mixed with salt and other condiments like red pepper powder, garlic, green onion, and others to be fermented, They contribute their tastes to Kimchi, creating a Korean Kimchi flavor. If a specific ingredient or a condiment's taste is too strong, it disturbs Kimchi's identity.

For example, Green pepper Kimchi is made with two distinctive characteristics of pepper taken out, so that no single character stands out in the Kimchi. The green pepper is soaked in salty water or vinegar, which removes the spicy taste. This represents the comparative and absolute harmony of Kimchi.

7. Advice for the Globalization of Kimchi's Culture

Globalization is neither a unilateral importation of foreign culture nor exportation of the Korean culture. The two way exchange does not necessarily mean globalization, nor does it stop at a quantitative numeration of globalization as an import or export quantity of goods. However, a qualitative improvement of a culture through creativity is a desired use of globalization, and this principle applies to the globalization of Kimchi as well. Greater amounts of inexpensive Kimchi exportation will not achieve a qualitative or quantitative success of Kimchi's globalization. Quality improvement in the making of Kimchi is equal to the honor of being an international food is the best way for the globalization of Kimchi.

The philosophy of globalization should be found in the humanistic values of Kimchi's culture. The previously discussed five values are all important, particularly three values that hold true to globalization. First is the altruistic contribution globalization and a world food culture, not a self-serving one like making money through the exporting of Kimchi overseas. Second is the globalization of Kimchi based on the idea of 'balance and independence', a value of respecting Kimchi's diversity and adapting to local circumstances. Third is the slow and long of globalization, not an impatient one-way globalization, which resembles the low temperature long period fermentation process of Kimchi.

First, let us go into detail about what is meant by altruistic globalization. Dreaming about the globalization of Kimchi that is only suited to Koreans' taste or Kimchi globalization solely aiming at economic gain would be self-centered and selfish globalization. As everyone has their preferred taste, so do people of each country with different food traditions. Imperialistic globalization of taste found in the cases of hamburger and coca-cola should not be repeated with Kimchi. It does not guarantee long-term continuance of a culture either. Globalization of Kimchi should be made in the way that Kimchi's value as a healthy food is recognized by the people of the world and they make

Kimchi or Kimchi-based foods themselves. It should not be like a multinational corporation's instant food made available at vending machines.

Kimchi is still a lesser-known food in most foreign countries. It has multiple tastes, such as salty, spicy, and sour. Unless a country's citizens are familiar with fermented foods, Kimchi is not an easy food to adapt into their diets. In order to have people choose Kimchi, a wider variety of Kimchi that is suited to the preferred taste of various people should be developed. Various tastes of Kimchi that adjust its salty, spicy, and sour tastes and texture would be a possible starting point. Various kinds of Kimchi, for example (1) salty, less salty, bland, (2) spicy, less spicy, mild, (3) sour, less sour, mild will give a wider choices to buyers. Cross-combination of the three tastes in varying degrees would be ideal, but it might be too complicated. Three big categories like strong, mild, and bland ⁴³ would be a realistic starting point of approach.

Detailed product specifications and packaging in different colors and design informing consumers of the taste and ingredients would be a good idea. For example, dark red packages for spicy Kimchi, red for mild Kimchi, and light red for bland Kimchi. The same idea might apply to its saltiness and time of the fermentation process for customers. An assorted of the basic three types of Kimchi in one package would also be possible for consumers, who are just learning about it.

In Korea, Kimchi is usually served with rice, though other staples are used. So, how to introduce Kimchi to countries and regions that have bread as its main food staple? Where bread is the staple food, salty side dishes are of less importance. In addition, bread and Kimchi do not go well together. Even where the merit of fresh vegetable fermented food is much appreciated, Kimchi seems hard to become their side dish. To solve this problem, there might be two ways to be considered. One is to introduce rice to them so that rice becomes a more common staple. Another is to introduce white Kimchi instead of spicy salty regular Kimchi.



43_ For example, three types of kimchi for commercial sales, (a) Salty, spicy, sour (b) all mild (c) all bland.

To introduce Kimchi to a bread food culture would be disturbing, as they do not go well either. A campaign promoting the merits of rice and Kimchi to the people of the world would be an idea. A general direction for Kimchi globalization should be the globalization of Korean foods and its rice food culture. In recent years, the defects of wheat flour have emerged as a topic of concern for many who are suffering allergies and genetically based disease, and in some countries, rice is beginning to replace bread. When rice spreads wider, it will need salty spicy side dishes like Kimchi. Just as wasabi became popular along with sushi and sashimi, Kimchi and rice together is believed to be a way for Kimchi to become more globalized.

White Kimchi does not need rice to enjoy it, and can be eaten with a variety of main dishes.. It can also be a side dish to bread. It would be better to introduce white Kimchi first to foreigners, because it is mild white Kimchi would be easier for those who are not familiar with Kimchi. It can be a steppingstone to move to enjoying the flavors of regular Kimchi.

Pursuing the commercialization of Kimchi globally is not suited to the tastes of foreigners. To introduce Kimchi and the Korean food culture to an international society and have people grow Napa cabbage in their garden to make Kimchi as Koreans do is a desired picture of the globalization of Kimchi culture. In other words, not the commercialization of Kimchi but Kimchi culture to be shared by the people of the world is a true globalization of Kimchi.

Second, the globalization of Kimchi should be based on the principles of 'balance and independence' and diversity. Monopolistic globalization that is blindly pushing traditional Korean Kimchi tastes is not different from the imperialistic globalization of coca cola. Imperialistic conquering of the world Kimchi market through a single item that is mass production should be avoided. That is an economic logic, not a cultural logic. Multiple small quantity productions and to share the diversity of Korean Kimchi culture with the people of the world will be a true globalization of Kimchi.

To share various Kimchi recipes and to have varieties of Kimchi introduced at the world market is what is needed. Kimchi ingredients need to be diversified and liberate the fixed idea of only a Napa cabbage Kimchi variety. It is the same with wine. Beside grapes, various fruits can make wine. Only then, the countries of the world would make Kimchi with their vegetables. Koreans need to understand fully that not the Kimchi exportation but Kimchi culture exportation is indeed for Kimchi to be globalized.

This does not mean that Kimchi exports are irrelevant and unconnected to Kimchi cultural exportation. Kimchi exports precedes the introduction of Kimchi's culture. Development of Kimchi to the preferences of the importing countries is needed as well as product diversification in terms of taste, ingredients, and condiments. Providing an assorted Kimchi package of various Kimchi dishes, such as Napa cabbage Kimchi, radish Kimchi, green onion Kimchi, or mustard leaves Kimchi or even a water cress Kimchi would be an idea. Napa cabbage Kimchi set composed of a whole head of Kimchi, wrapped Kimchi, and neatly cut Kimchi would be an idea, too.

A more aggressive diversification of Kimchi campaign is to have Kimchi transcend national boundaries as being a Korean food. Argument over where is the origin of Kimchi is meaningless. The very fact that Kimchi has been designated as the World Intangible Cultural Heritage negates the need for the dispute. It would not help Kimchi's globalization either. Exchanges and communication about fermented foods of other countries on an equal basis is what is needed. To go hand in hand with other countries is globalization. Concentrating on the improvement of Kimchi's quality and innovative ideas like developing an assorted package with Korean Kimchi, Chinese Paochai, and Japanese Tsukemono is needed.

Kimchi globalization does not mean just the exporting of Kimchi to make money from it. It means the globalization of various Korean Kimchi-based menus as well, for example, Kimchi stew, Kimchi pancake, tofu with stir-fried Kimchi, Kimchi fried rice and others.

Another idea is the development of a mixed national or fusion Kimchi menu, such as Kimchi sushi, Kimchi ramen in Japan; Kimchi dumplings, Kimchi Palbochae (stir-fried seafood and vegetables) in China; Kimchi hamburger, Kimchi sausage, and others in America. This will achieve a two-way exchange of cultures through globalization.

When exporting Kimchi to foreign countries, it is important to make Kimchi suited to the people's preference. For example, bland tasting Kimchi with no garlic and less chili powder would be better because Japanese do not eat garlic and do not use chili powder much. For Indonesians and other countries in Southeast Asian countries, Kimchi with more fish sauce is advised as they use fish sauce a lot.

A third point is to go slowly, just as Kimchi has a low temperature fermentation process, but keep in mind that it also has a long period of preservation. Also, Kimchi's strong smell, and its salty and spicy taste, makes a quick entrance into globalization seem not feasible. A slow, continuous, and gradual globalization resembling Mugeunji (old Kimchi) will in the end make Kimchi a true world intangible cultural heritage.

Not a one-way supply or pushy exporting of Kimchi products, but a voluntary acceptance and smooth adaptation should be induced. The Korean floor heating system Ondol that is getting popular in China and Uzbekistan would be a desirable example for culture exportation. In China, apartments with an Ondol floor heating system, are called a Korean style apartments, and it is a symbol of high-class housing. Likewise, long-term continuous efforts need to be made to introduce Korean Kimchi to the world and establish itself as a high-class food.

A slow-but-steady implementation requires a viewpoint shift. An intentionally slow globalization introduction of Kimchi, which is like a slow tour to walk the Olle trail not like a quick package tour is believed the best path that Korean Kimchi globalization needs to take, and not just Kimchi exportation. A campaign to donate Kimchi to the poor people in Southeast Asian countries where rice is the staple food is also advised. To visit local people and teach them how to make Kimchi with

what vegetables and condiments are available on site and a donated Kimchi fridge to help them will promote Kimchi better. Kimchi fridge production companies could be a sponsor for the campaign. When these efforts are orchestrated into Kimchi globalization, Kimchi will become more than a mere side dish. The Kimjang culture, which is the making of Kimchi together and sharing it with neighbors will be practiced all over the world.

8. Changes in everyday life brought by Kimchi and the value of moderation

Kimchi has brought about many changes to everyday life. In the past, people were asked to say “cheese” when taking pictures, but now they ‘say Kimchi’. The Kimchi fridge has become a necessary item for everyday households, and people can have Kimchi throughout all seasons. The home electronics market has enjoyed unexpected increased demands as well.

Korean Kimchi has been recognized as an international standard Kimchi by the Codex Alimentarius Commission (CAC) and as a world’s best health food. It was designated as the UNESCO Intangible Cultural Heritage of Humanity. One more thing that is needed for Kimchi’s globalization is to have world-renowned chefs participate in promoting Kimchi to the world through creative and innovative dishes in their restaurants, and through world competitions, such as the ‘World Kimchi Making Competition’, ‘International Kimchi Cuisine Contest’, and other various programs to have them develop new Kimchi cuisine.

Today in Korea, epicures tend to evaluate a restaurant’s quality based on its Kimchi. One does not need to be a gourmet chef, anyone one with some interest in foods is able to make comments based on the quality of Kimchi that is being served. Kimchi has become a criterion to judge ones cooking skills. This could also happen in the food culture of the world. As Kimchi is a composite fermented food with various

ingredients mixed in it, it can be a reasonably and objectively food for which to make a standard for evaluation. The possibilities for the development of new Kimchi and Kimchi based cuisines are believed limitless.

Kimchi symbolizes the virtue of moderation. Over fermentation may make Kimchi too sour and insufficient fermentation would make have a less than desired taste. Therefore, optimum fermentation requires ‘the virtue of moderation’, and from a humanistic point of view, the values learned from Kimchi culture are also virtues of moderation at its most important.

Not only does the fermentation process require modernization, but Kimchi’s taste as well requires moderation. Too salty, too spicy, too mild, too dry, or too watery all make a wrong Kimchi. Tasty Kimchi requires the best ingredients to truly be at its best, so it takes premium quality amounts of water, saltiness, an optimum time for fermentation, and premium condiments, it resembles moderation.

The value of Kimchi does not stop at moderation. Kimchi is not aiming at a uniform taste with everything made with optimum ingredients. There is a wide variety of Kimchi, Geotjeoli (fresh Napa cabbage salad with garlic and chili powder), Mugeumji, and water Kimchi to name a few. Going beyond moderation will open a path for wider variety.

Kimchi cannot be summarized in on a one-page recipe, because the kind of Kimchi a chef makes is entirely up to maker’s choice. While pursuing the virtue of moderation in the Kimchi culture requires moderation and shall not be excessive. Flexibility and freedom are the transcending qualities of the humanistic values that should be incorporated in the Kimchi philosophy.

Challenges and the prospect for the
sustainable protection of the “Kimjang
culture”, a UNESCO Intangible Cultural
Heritage of Humanity

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I. Significance of the registration of “Kimchi and Kimjang culture” as an intangible cultural heritage

At the end of 2013, “Kimchi and Kimjang culture” was put on the representative list of the UNESCO Intangible Cultural Heritage of Humanity. It increased Koreans interest in their Intangible Cultural Heritage, and was a turning point that turned their attention from having just Korean’s tangible heritages on the World Heritage Sites to their intangible heritages.

While registration on the list is often considered recognition of cultural superiority, the ultimate objective of registering the intangible cultural heritage is to promote cultural diversity, the creativity of human beings, and intangible cultural heritages through mutual appreciation among communities, groups, and individuals. In this regard, the registration of ‘Kimjang culture’, the practice and traditions of making Kimchi for the winter months, on the UNESCO list stands for an opportunity to share Korean knowledge and the spirit of sharing contained in Kimchi making with the world. It is also an acknowledgment of Kimchi making as a culture, as evidence of Korean’s creativity, and its value as a living culture.

The UNESCO registration of ‘Kimjang culture’, an enduring and traditional living culture of Korea, also contributed to re-discovery of the value of other cultural heritages that have been considered of lesser importance. Korean’s understanding of intangible culture properties was that they are traditionally special skills or performances transmitted by designated individual initiates or groups, an idea based on the 1962 <Cultural Property Protection Law> and the Ordinance for Cultural Properties Designated by Cities and Provinces adopted in 1964. The registration of ‘Kimjang culture’ following Arirang (the best known Korean song, the words tell of lovers parting over a hill) in 2012 expanded the scope and changed of the concept of the intangible cultural properties for Koreans.

It is now one year since the ‘Kimjang culture’ was put on the UNESCO list. It is rather early to examine if the various protective measures for maintaining the ‘Kimjang culture’ that Korea has promised when applying for the registration have actually been put into practice. As the value of ‘Kimjang culture’ depends on the efforts of the ‘community’ concerned, Koreans should keep in mind that their diverse efforts for the protection and maintenance of the Heritage are of absolute importance from early on.

This presentation is to review the efforts and achievements made by the so-called ‘communities’. These communities include local governments, organizations, groups, and individuals, who have been assigned a position for the protection of intangible heritages. They have been part of the community since the registration of ‘Kimjang culture’ on the List of the Intangible Cultural Heritage of Humanity. For this, we will thoroughly review the application for the registration submitted to the UNESCO in March 2013, and look at the communities’ role and efforts for the execution of protective measures. Through this process, Koreans should be able to see more clearly, what is their task for the continued development of ‘Kimjang culture’ and its future.

II. Community Participation in registering the ‘Kimjang culture’ on the List of the Intangible Cultural Heritage of Humanity.

The registration of ‘Kimjang culture’ as an Intangible Cultural Heritage of Humanity, UNESCO is significant in that it has changed the generally accepted concept of what is an intangible cultural property in Korea. Following are two main points. First, ‘Kimjang culture’, which was neither a national intangible cultural asset nor a city or province, was acknowledged as a designated intangible cultural property, and an application was sent to UNESCO. The List of the Intangible Cultural Heritage of Humanity helps promote a nation’s awareness of the importance of its non-designated intangible cultural properties. It also means that Korea has accommodated the definition and the scope of the Convention Concerning the Protection of the World Cultural and Natural Heritage mandates. Second, individuals, groups, and communities participated in applying for the registration in a way that could reminded them of their identity as the protectors of their intangible cultural properties. This changed in the understanding that everyday activities, seemingly of minor importance, could be a valuable cultural asset has broadened the perspectives of protecting the intangible properties.

Though the registration of ‘Kimjang culture’ as the Intangible Cultural Heritage of Humanity is complete, there is still a need to review major issues and other details behind the applying for the ‘Kimjang culture’ to the list, because anything insufficient or overlooked might emerge as an obstacle in planning and execution future protective measures. The preparations for applying for the registration took about 2 years and the major application process was as follows.

Date	Content
Apr. 2011	Kimchi was chosen as the item to apply for the registration
Jun.-Aug. 2011	Prepared the application
Oct.-Nov. 2011	Pictures, videos prepared
Jun.-Feb. 2012	Back-up references compiled, letter of agreement signed
Mar. 2012	Application submitted
Aug. 2012	Kimchi was selected as a preferred subject for review for the year 2013
Oct. 2012	UNESCO asked additional references on Kimchi
Oct. 2012	Final review and revision of the application
Mar. 2013	Application submitted to UNESCO
Feb.-May. 2013	UNESCO sub-committee's evaluation meeting on the application
Sep. 2013	Final appraisal meeting
Dec. 2013	Decision made to register Kimchi and 'Kimjang culture' (at the 8th conference, Baku, Azerbaijan) as an intangible cultural heritage.

What is worth special attention, as to the application procedure for the registration of 'Kimchi' and 'Kimjang culture', is how the supporting reference materials and letters of agreement were collected? In January 2012, the Cultural Heritage Administration sent a request to national organizations, local governments, the World Kimchi Institute, and others to send their letters of agreement about their Kimjang-related current activities and plans. These submitted references and agreement letters were used in the application for the registration. People's letters of agreement are necessary in accompanying references to prove that the successful registration of 'Kimjang culture' as an Intangible Cultural Heritage of Humanity has all of the people's support.

Considering community agreement is a key factor for evaluation, so the Cultural Heritage Administration convened a conference. This was instead of usual practices of sending the background information by mail, and asking for a returned agreement via fax or postal mail. The Cultural Heritage Administration briefed everyone on the background of the registration application, and asked for everyone's full support.

To get the people's participation, the Administration requested government agencies and local governments to put up 'Kimchi and Kimjang culture' UNESCO registration banners and open a web page for gathering the people's testaments of supports. The web page carried 'yes or no vote' surveys, list and dates of open exhibitions, and carried an online Kimjang picture contest. In addition, comments were relayed on twitter and facebook as well.

The scope of supports for the 'Kimjang culture' community is entirely by Korean people. The above activities have been arranged considering 'community' as an overly broad term, and it is hard to prove exactly what community participation in applying for the registration is.

<Registration application C, related communities, groups, individuals>

In a narrow sense of 'Kimjang culture', community means families, relatives, and village-based labor exchanges among women. Not only families but social and cultural organizations, such as companies, schools, and women's associations, make Kimjang an event of social sharing, to promote cooperation among community members, or for the transmission of 'Kimjang culture'. In other words, Kimchi and Kimjang communities transcend regional, social, and economic barriers. It encompasses the entire community of Korean people.

In the course of collecting 'Kimjang culture' references, various activities were carried out by government organizations, local governments, and groups, which have all been confirmed. Of the many, the activities of the Ministry for Food, Agriculture, Forestry, Fisheries, and the World Kimchi Institute stand out. The Ministry for Food, Agriculture, Forestry, and Fisheries held an event called "Love & Kimjang Sharing Event" with workshops about Kimchi's globalization, international symposia, a Korean Kimchi Festival, and several Kimchi exhibitions at home and abroad. There were also Kimchi promotional activities, statistical research about the Kimchi industry, various activities for the expansion of Kimchi's culture and Kimchi's

consumption increases. The World Kimchi Institute was established in 2010 also made significant achievements. It conducted a survey on 'people's evaluation of Kimchi' with a questionnaire asking people 'how often do you make Kimchi', 'Do you buy Kimchi', and others, an analysis on Kimchi and Kimjang were to be used as a reference for future policies.

Local governments also actively held 'Kimjang culture' and sharing events. Gwangju city was especially outstanding. Gwangju has held the World Kimchi Culture Festival every year since 1994. It will continue and preserve 'Kimchi and Kimjang culture', as well as promote the excellence of Kimchi. The city also invited the World Institute of Kimchi to it.

As said above, there were a broad scale and active participations of the related communities, groups, and individuals in helping out with the application for the UNESCO registration. Their agreement for the application was critical in getting UNESCO's recognition. UNESCO advises to have as wide a number of people's participation as possible, for example, government, communities, NGOs, research institutes, and others.

It is required for communities to have participated in preparing the application for registration. Following is what was written in the application.

Various groups of people participated in preparing the registration application for the 'Kimjang culture'. They can be divided into three groups. First, Korean people who make and enjoy Kimchi. Second, the local governments, who give support for Kimchi-related events. Third, researchers and specialists, who conduct research and help establish policies. Local governments sent a report on their Kimjang related activities together with a letter of agreement, and they were used to fill out the Registration Standard 3.

The 'Kimchi and Kimjang culture for UNESCO registration committee' was formed, which was composed of related specialists, researchers, and government representatives. Since its establishment in July 2011, it has had 3 meetings to discuss whether to pursue 'Kimchi and Kimjang culture' registration, what to include in the application, and a first draft of the application.

It is encouraging that the committee's various efforts brought a broad number of active people to participate. However, due to current government systems and time limits, the application was led mainly by the government, not by communities concerned or by appointed specialists closely cooperating with the communities. It is regretful that in the course of the application's process, further in-depth discussions had not been made on what and how the communities will do after the registration for safeguarding the 'Kimjang culture'.

III. Social Interests on Kimjang since its registration as a UNESCO Intangible Cultural Heritage

1. Commemorative Kimjang events and Kimchi sharing at home and abroad

After registering Kimjang as the world intangible heritage, various organizations held celebration events. The Cultural Heritage Administration, who was the organization of primary responsibility, held a celebration event in cooperation with the Ministry of Gender Equality and Family, and the Ministry for Food, Agriculture, Forestry and Fisheries in order for value reorientation and awareness to increase awareness of the registration events about 'Kimchi and Kimjang' as a national cultural asset. The event was held as a parallel celebration program along with the first anniversary of the Arirang registration. It was organized to make it 'the entire Korean peoples' event' where all Koreans home and abroad participate and to make 'Kimchi and Kimjang culture' a national symbol of Korea through generational transmission and appreciation of Korean traditions.

<Kimchi Culture Festival>

- Time : November 16, 2013
- Location : Gyeongbokgung palace
- Host : Ministry of Gender Equality and Family, Cultural Heritage Administration

- Time : December 5, 2013
- Location : Heungryemun gate ('spreading courteousness' gate),
Gwanghwamun gate (main entrance gate) of the
Gyeongbokgung palace ('shining blessings' palace).
- Host : Ministry for Food, Agriculture, Forestry and Fisheries,
Cultural Heritage Administration

<Kimchi, Kimjang Culture,& Arirang Exhibition>

- Time : December 14 ~ 23, 2013
- Location : National Institute of Intangible
- Topic : History and regional transmission of 'Kimjang culture'

<Kimchi & Kimjang culture, demonstration and hands-on experience event>

- Time : December 14, 2013
- Location : National Institute of Intangible
- Host, Organizer : National Institute of Intangible Culture,
Institute of Korean Royal Cuisine (120 participants including
specialists, it is linked to the Kimchi festivals of the local
governments such as Gwangju and Jeonju)
- Objectives : to celebrate the registration of 'Kimjang culture' as
Intangible Cultural Heritage of humanity, to re-evaluate the significance
of the Kimjang tradition, a family event in everyday life, to introduce and
share various Kimchi-based foods plus the historical changes of
'Kimjang culture' exhibition
- Programs: local "Kimjang culture" demonstration, introduction to
Kimchi ingredients, "Kimjang culture", a meal with Kimchi side dish.

The registration of 'Kimjang culture' was greatly welcomed by overseas Koreans, and the Korean embassies and cultural centers hosted various commemorative events.

<Korea-Japan Kimjang grand festival>

- Time: December 7, 2013
- Location: Korean Embassy in Japan (200 participants)
- Objectives: Celebrating the registrations of 'Kimchi and Kimjang culture' a representative food culture of Korea and Japanese 'washoku' (和食) as the Intangible Cultural Heritage of Humanity, Japanese leaders and leading citizens were invited to the hands-on Kimchi making experience event at the Korean

Embassy in Japan. It is to promote Kimchi and Kimjang culture; to increase cultural exchanges and strengthen cooperation between the two countries; to introduce Koreans' 'community spirit' shown in 'Kimjang' winter Kimchi making together to get through a long winter and the tradition of sharing with neighbors.

This in turn would help the normalization of the relations of the two countries.

- Programs : Only Korean ingredients will be used. Regional and seasonal Kimchi will be introduced. All program participants will receive Kimchi made on site. Kimchi made at the program will be given to 75-year olds or above Koreans living in Japan. The Kimchi will also be used as the year-end and New Year's Day present to the 2011 earthquake victims still living in temporary dwellings and to the Japanese Embassy and other related organizations.
- Promotion: Japanese media: Kyoto, Asahi, Yomiuri, Mainichi, NHK, TV Asahi, Nihon Broadcasting.
Korean media: Yonhap News, Chosun, Joongang, Hankyoreh, Mindan, Tongililbo, About 40 reporters covered the event.
Most of Japanese media reported on the Kimjang festival on their evening news.

<Chorus Forum (Kimjang culture), ‘Kimjang culture: a previous cultural heritage of humanity’>

- Time : December 5, 2013

- Location : Korean Cultural Center

- Host : Korean Cultural Center, Korean Embassy in America
(about 100 Korean and American VIPs)

- Objectives : To celebrate the registration of Kimjang culture as an Intangible Cultural Heritage of UNESCO and to introduce Kimjang culture to the mainstream society of America.

- Programs : A lecture on the history of Kimjang culture and Kimchi recipe, Kimchi making presentation, a reception with Kimchi-based menus including bossam Kimchi (‘wrapped Kimchi’).

- Promotion : Joongang, Kyunghyang, KBS, Yonhap, Hankook (America), Joongang (America) reported on the forum.

‘2014 Seoul Kimjang Culture Festival’–Happy Seoul, Winter Kimchi making day.

- Time : November 14 ~ 16, 2014

- Location : Seoul Plaza, Gwanghwamun plaza, Cheonggye plaza, Taepyeongro, Sejongro Park

- Objectives: Transmission of Kimjang culture, globalization of Kimchi industry, expansion of Korea’s sharingculture:

The festival is to revive the Kimjang culture that is in danger of being forgotten among Seoul citizens and to promote the excellence of Kimchi to the world. Industries, groups, public organizations are invited to this international festival with the people of the world participating. It is to promote Kimchi as a health food and Kimjang culture to the world.

Programs: symposium, Kimjang sharing, exhibition, Kimchi sale, hand-on experience of Kimchi making.

The above events are mostly single events celebrating the registration of ‘Kimjang culture’ as a UNESCO cultural heritage. Today, one year after the registration, no organization is hosting a follow-up commemorative event. ‘Kimjang culture’, however, is being actively practiced around Kimchi making season, for example, most local governments hold ‘Kimchi’s sharing of love event’.

2. Academic Interests and Discussions on the ‘Kimjang culture’

While following up on the administrative procedures for the application of ‘Kimjang culture’ for registration is the government’s responsibility, it should also be supported by academic studies on the subject, consultations, and provide various advice from the perspective of humanitarian studies. A broad-spectrum academic discussion at various symposiums on the ‘Kimjang culture’ will provide a foundation of knowledge and principal perspectives for the protection of the ‘Kimjang culture’.

Kimchi is faced with many challenges. The Kimchi industry’s development and the changes following the Kimchi fridge emergence pose big questions to the commercialization of Kimchi in the future. At the 1st Kimchiology Symposium, professor Kim Kwan-gok pointed out that close attention should be given to how to spread the ‘Kimjang culture’ as an asset with humanistic values. It was suggest that there be a development of various Kimchi by the people of the world in their homes that are pleasing to their tastes. This development of various Kimchi-based menus should not be considered a desecration to Kimchi. It should be accepted as diversification and development of Kimchi.¹ It is believed a wider understanding and further discussions on ‘Kimjang culture’ and Kimchi industry will help provide a philosophy as well as practical measures for the continuation or transmission of ‘Kimjang culture’.

Symposiums were held on Kimchi and ‘Kimjang culture’ around the time of the UNESCO registration.



1_ KG Kim, 『Kimchi and Kimjang Culture : From the Perspective of Cultural Anthropology』,

『Humanistic Understanding of Kimchi&Kimjang Culture』, World Institute of Kimchi, 2013, p24.

<2013 UNESCO Intangible Cultural Heritage Advisory Organization (NGO) International Symposium: Kimchi and Kimjang Culture>

- Time : September 26, 2013
- Location : Important Intangible Cultural Property Training Center, Korea Cultural Heritage Foundation
- Objectives : to promote awareness of Kimchi and Kimjang culture, To provide a forum for various discussions on Kimchi and Kimjang culture As intangible cultural assets
- Contents : social and cultural significance of Kimchi and Kimjang culture, Various countries' traditional foods, Kimchi and Kimjang culture in modern Korea

<2013 World Kimchi Institute Symposium: Kimchiology! Humanistic Understanding of Kimchi and 'Kimjang culture'>

- Time : November 7, 2013
- Location : National Folk Museum
- Host : World Institute of Kimchi
- Objectives : Prior to the final screening by the UNESCO, the symposium is to review the Kimjang culture's value as cultural heritage and to promote peoples' awareness of it.
- Contents : discussions on Kimchi and Kimjang culture as intangible cultural assets, other scientific analysis on Kimchi. Definition of Kimchiology. History of Kimchi and Kimjang culture. Comparative study of Kimchi compared with the vegetable pickles of northeast Asian countries. Uniqueness and universalness of Kimjang culture. Social and economic analysis on Kimjang culture. Possibility for commercialization and promotion of Kimchi as part of the Korean culture in international society.

<Kimchi & 'Kimjang culture' and Arirang Grand Discussions>

- December 13, 2013
- Location : National Palace Museum

- Host : Cultural Heritage Administration
- Objectives : projects development, planning, re-evaluation of Kimchi and Kimjang culture as intangible cultural heritage of the world, globalization and industrialization of Kimchi and Kimjang culture
- Topic: Reinterpretation of 'Kimchi & Kimjang culture and Arirang'
- Discussions: social and cultural values of Kimjang culture, cultural diversity, introduction to various Korean foods and plans for the future.

**<2014 the 4th Kimchi Industry Development Symposium:
Development strategies responding to the changes of the world>**

- Time : October 7, 2014
- Location : Gwangju Museum of Art
- World Institute of Kimchi
- Contents : Development of Kimchi industry. Stable supply of Kimchi ingredients and others.

The above symposia and grand discussions are mostly to celebrate the registration of 'Kimjang culture'. At the 'Humanistic Understanding of 'Kimjang culture' symposium, various discussions have been made regarding the establishment of 'Kimchiology' and 'Kimjang culture'. The 'Kimchi and Kimjang culture' grand discussions were prepared to find ways to activate transmission of the 'Kimjang culture', but it failed to lead to further in-depth discussions.

'Kimjang culture' from the perspective of humanistic understandings was partly discussed at the International Society for Comparative Folklore Studies autumn seminar (November. 14~ 15, 2014) under the topic 'Comparative Reviews of the UNESCO Intangible Cultural Heritages'. At the seminar, it was pointed out that the commercialization of Kimchi and Kimchi industry do not agree with the UNESCO spirit regarding the intangible cultural heritages. There was a paper

presentation stating that the registration of ‘Kimjang culture’ narrowed the gap between the Cultural Property Protection laws and the Convention for the Safeguarding of the Intangible Cultural Heritage and it is significant that the registration has changed the paradigm of the intangible cultural heritages’ protection.

Academic discussions on ‘Kimjang culture’ carried two things; discussions on ‘Kimjang culture’ itself and discussions on the application for the registration on the UNESCO intangible cultural heritage list. Future discussions are expected to be on ‘Kimchi and Kimjang culture’ in respective communities.

IV. Safeguarding measures for the continuation of ‘Kimjang culture’ stated in the application for the Intangible Cultural Heritage of Humanity

1. Safeguarding measures prior to the registration of ‘Kimjang culture’

The UNESCO Convention for the Safeguarding of the Intangible Cultural Heritages is interested in whether the community concerned is able and willing to secure measures to continue ‘Kimjang culture’. It considers past and present safeguarding measures a very important factor in their evaluations for registration. The Convention, therefore, asks to state in detail how the community concerned has protected the cultural heritage as well as problems such as shortages of funds and others. The followings are Korea’s commitment to safeguarding the ‘Kimjang culture’ as stated in the application.

<Application for Registration 3. Safeguarding measures>

a. Many Kimjang events for charity have been organized by women’s associations and big companies. As of 2010, there are 3,477 women’s associations nationwide, organized at apartment complexes, villages, and city districts. Kimchi made at charity events are given to low-income families, elderly people, or people

who for various reasons could not make winter Kimchi. Big corporations as well hold Kimjang events as one of their social service programs.

b. In total, 16 cities and provinces either host or sponsor various Kimjang events to share Kimchi with low-income families. Kimjang events are held regularly with as little as 5 and up to 20 events, respective of cities and provinces, with the budgets ranging from 2 million won (about 2,000 US dollars) up to 100 million won (100,000 US dollars).

c. Some cities hold Kimchi festivals to promote the re-evaluation of Kimchi and ‘Kimjang culture’. For example, Gwangju city holds the World Kimchi Culture Festival around winter, “Kimjang culture”, or Kimjang season in either October or November, where general people and specialists participate. The World Kimchi festival is being held every year since 1994 and thus far, 1.5 billion won (1.5 million US dollars) budget has been spent on the festival. The festival has ‘let’s make Kimchi’ program for children and foreigners.

d. For more scientific and systematic management of Kimchi and Kimjang knowledge, research centers and exhibition halls have been established. The Ministry for Food, Agriculture, Forestry, and Fisheries established the World Institute of Kimchi and Pusan National University, the Kimchi Research Institute. Both research centers conduct various Kimchi and Kimjang related projects, including exchange of related research results, surveys, and publications.

2. Future Safeguarding Measures after the UNESCO Registration of Kimjang

The registration application requires a statement of future safeguarding measures for the concerned cultural heritage. UNESCO considers the protection and promotion of the heritage most important. The following

is Korea's promise for future protection of Kimchi and 'Kimjang culture'.

<3.b. Future safeguarding measures>

a. While Kimchi and 'Kimjang culture' has positive sustainability, still various safeguarding measures have been prepared. As continuation of any intangible cultural assets depends on active transmissions, Kimchi and Kimjang are included in the curriculum from the 5th grade of elementary school to 1st grade high school students. Elementary, junior high, and high school students learn about Kimchi and "Kimjang culture". Some schools grow Napa cabbage in the backyard, then when the cabbages are fully-grown, they make Kimchi together and eat the Kimchi during winter. According to teachers, students who have experience growing cabbage and making Kimchi tend to like Kimchi more. The cabbage growing in the backyard program is being expanded to many schools.

b. Napa cabbages are not only grown in the backyards of schools. In an effort to give urban people a place of relaxation from the heartless and fast moving city life, and to make a better use of land, many local governments enacted ordinances allowing about 40% of the green belt be used for vegetable gardens. Growing vegetables including gardens near homes will make "Kimjang culture" easier and less expensive.

c. Every year around Kimjang season, newspapers and televisions inform people when the best days are for Kimjang, respective of regions. They also announce the so-called 'Kimjang index', which tells families of the average Kimjang expense for a family with 4 members. The government keeps close eyes on the supply-and-demand of Kimjang ingredients to make sure both common households and farmers do not suffer from sharp variances in prices, so that it is neither too high nor too low.

d. Laws to protect Kimchi and Kimjang are being prepared. The

current Cultural Property Protection Laws (enacted in 1962) do not register the cases like Kimchi and Kimjang on the national cultural property list. It is because only the things of cultural value that can designate specific individuals, groups, communities as the main entity can be on the list. Respecting the spirit of the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage, the Cultural Heritage Administration made a comprehensive ‘Korean Intangible Cultural Property List’ which includes Kimchi and Kimjang culture in it. The Administration is also working on separate laws for safeguarding the intangible cultural assets.

As to how the Korean government will support and make sure the proposed future protection measures for the intangible cultural properties are honored, Korea wrote in the application as follows.

a. The Korean government (Cultural Property Protection Administration, Ministry for Food, Agriculture, Forestry and Fisheries, the Ministry of Education, Science and Technology) and local governments will support the execution of the Kimchi and Kimjang culture protection measures. Both the central and local government will provide administrative and legal assistance to have Kimjang, the winter Kimchi making, continue in Korea.

b. The Intangible Cultural Property Administration included Kimchi and Kimjang culture in ‘the Korean Intangible Cultural Property List’. It has enacted the orders for the management of the listed intangible cultural properties and is also working on the laws for safeguarding the intangible assets. The Ministry for Food, Agriculture, Forestry, and Fisheries will also do its best for the protection of Kimchi and Kimjang culture. The protection measures include the establishment of Kimchi Town, providing financial support for Kimchi-related organizations, conducting surveys on Kimchi and Kimjang culture, providing assistance for Kimchi and

Kimjang related academic research, Kimchi international conferences, and others. The Ministry earmarked a 1.5 billion won budget for these activities.

c. The Ministry of Education, Science, and Technology will expand ‘vegetable growing in the school backyard program’ at elementary schools, junior-high schools, and high schools. Kimchi and Kimjang will remain in the curriculum. All the big sixteen cities and provinces will continue their support for Kimjang events. The Korean people will continue with Kimjang and eat Kimchi, which has been proved, in a survey by the Korea Rural Economic Institute that found 90.2% of the respondents said they would continue with Kimjang. The Koreans of various sectors of life will continue to participate actively in the various Kimchi related activities, such as women associations, Kimjang charity events, Kimchi festivals, the Kimchi town activities, cabbage growing in the school backyards program, and others

While cultural property protection activities after the registration are important, preparing the very foundation for ‘protecting the cultural properties’ true to its original intention prior to its registration is more important. Continued discussion is needed in administrative and academic areas on what and how the registration will influence the communities, what roles the intangible cultural assets could play for community developments, and others.

V. Tasks and Prospectus for the sustainable protection of ‘Kimchi and Kimjang Culture’

The Convention for the Safeguarding of the Intangible Cultural Heritage was ratified at the UNESCO general conference on October 17, 2003. Korea joined the Convention as its 11th member state on February 9, 2005, and since then it has actively participated in carrying out the

purports of the Convention. For four years from June 2008 to June 2012, it served as a member of the intergovernmental committee and a member of a screen organization in charge of screening the applications for the registration in the List of the Intangible Cultural Heritage of Humanity.

Korea's experiences with the protection and management of the intangible cultural properties have been shared with the Convention member states. Through its increased international cooperation, 16 Korean intangible cultural properties have been included in the List of the Intangible Cultural Heritage of Humanity. With the additional registration of Nongak (instrumental music of farmers), Korea will be a country with 17 UNESCO intangible heritages.

UNESCO's international protection activities can be summarized into three categories: to draw up and make an announcement of the list of the intangible cultural heritage of humanity (Article 16); to draw up and make an announcement of the list of intangible cultural heritage in need of urgent safeguarding (Article 17); and to introduce best practices in safeguarding the intangible cultural heritage in a regular report (Article 18). The Convention places emphasis not on the heritage list, but on sharing the best practices in safeguarding the heritages. Despite the 17 registrations on the list, no Korean case has been chosen as an example of the best practice in safeguarding a heritage, which is believed to be in need of reflective reviews.

1. Kimjang Culture Research and Application

What is referred to in Article 2 (no. 3) of the Convention for the Safeguarding of the Intangible Cultural Heritage, 'safeguarding' means measures aimed at ensuring the viability of the intangible cultural heritage, including the identification, documentation, research, preservation, protection, promotion, enhancement, transmission, particularly through formal and non-formal education, as well as the revitalization of the various aspects of such heritage. In other words, safeguarding is to ensure long-term viability of the intangible cultural heritage by groups and communities.

Main provisions of the supplementary articles (50~51) enacted in conformity with the Convention as to safeguarding measures before and after the registration are as follows.

Article 50 (Recording)

- ① The administrator of the Cultural Heritage Administration, mayors, and governors of provinces are responsible for collecting, compiling, maintaining, and preserving the record of the intangible cultural heritage in their territories; location, status of transmission, contents and other related matters in the forms of recording, photo, video, stenographic record, and others.
- ② If the administrator of the Cultural Heritage Administration deemed necessary for the preservation, transmission of the intangible cultural heritage, she/he may commission the collecting and compiling works foresaid into individuals, research institutes or groups, who have specialized knowledge on the intangible cultural heritage.
- ③ The administrator of the Cultural Heritage Administration is required to build the digital data of the collected and compiled records mentioned in and make it available for the public's use.

Article 51 (Intellectual property right protection of the intangible cultural heritage)

- ① The administrator of the Cultural Heritage Administration is required to build the digital database containing the status of transmission, content, and others of the intangible cultural heritages and protect them from international patent applications by putting them on the home pages protected by the international patent convention.
- ② The administrator of the Cultural Heritage Administration is required to try for active transmission of the intangible cultural heritage and for the creation of advanced knowledge or skills of the cultural heritages. The administrator should take necessary

measures in conformity with the Contents Industries Promotion Act to protect the intellectual property right of the initiators.

The above articles explain that countries, cities, and provinces should continue working to discover undesignated heritages through regular checking, interviews, and on-site research on prospective intangible cultural assets. UNESCO gives particular emphasis on thorough research on the transmission communities and transmission regions, on building inventories and follow-up measures in evaluating for the registration of the UNESCO heritages.

Previous symposiums and various events to have the Kimjang culture registered on the UNESCO list received criticism that they were one-time events. The criticism is believed because the above events failed to have an in-depth look into the changes of Kimjang customs in relation with social changes, the role of Kimjang in enhancing affinities between urban and rural areas, among generations, and in eliminating differences between classes. The symposiums, along with other various events, should provide a forum for discussing and developing ways to continue Kimchi making and Kimjang culture that is in keeping with a modern Korean society, which has changed a lot in life style and living conditions.² This is particularly true in light of when Korea is becoming a multi-cultural society. 2 Presently, research on Kimjang culture in civic sectors and academic circles is not active. More opportunities and support for in-depth studies on Kimjang culture from various perspectives are believed needed. More avenues for sharing various research results and continuous searching for appropriate ways to preserve and transmit Kimjang culture should be provided.

Kimjang culture archive building is believed urgently needed, especially for research on Kimjang cultural activities overseas. The stenographic recordings of them need urgent attention, and the results of the studies can be used for building a Kimjang cultural basic database.



2_ KG Han, 『Cultural Anthropology of Kimchi and Kimjang Culture』, 『Humanistic Understanding of Kimchi and Kimjang Culture』, World Institute of Kimchi, 2014, p295.

Thus far, other than at the Kimchi museums, no Kimjang culture database is available. A comprehensive and systematic collection of references is needed, which includes the list of research titles, visual references, books, thesis, magazines, academic journals, pictures, and others. The application preparation team for the UNESCO registration had trouble in finding some good pictures of Kimjang culture. They had to use the pictures submitted from the Kimjang culture photo contest, which was a definitive evidence for the need for a database building. Collection of Kimjang cultural references (purchase, rental exhibition etc.) and making them available to researchers, cultural transmission individuals, groups, communities, the general public, and people of overseas is necessary.

Thus far the only available information on Kimjang culture are related promotional literature and research from the UNESCO registered cultural assets video (English, French, Korean) produced by the National Cultural Properties Research Institute, 『Kimjang Culture』 (English) by the Korea Cultural Heritage Foundation, and 『Humanistic Understanding of Kimchi and Kimjang Culture』 (English), a compilation of the 1st Kimchiology symposium papers, by the World Institute of Kimchi. An on-line service providing access to wider spectrum of users to Kimjang pictures and videos owned by the World Institute of Kimchi, on-line archives connected to various Kimjang content owned by Kimjang of related research and government organizations, and stenographic recordings are needed.

Based on research thus far and surveys, a permanent exhibition of Kimjang culture could be built. Various program developments are needed considering that there is a Kimjang culture exhibition and other planned events, which can be used as cultural diplomacy resources. Besides, in order to expand Kimjang culture and its values throughout communities, there should be access to on-site studies and academic research. A project that should be actively pursued. Academic seminars, forums, and other various open discussion venues need to be provided as well, so that individuals, communities from home and abroad can

participate and share their knowledge and opinions. The results of these discussions shall be reflected to further expand Kimjang culture.

Recently, in order to establish a local identity, local governments are actively hosting various festivals, including a Kimjang culture festival. However, national level supports for these programs are few. It is advised that there is a need to keep researching Kimjang culture as a prerequisite for establishing a legal basis for planning larger support form a national level.

2. Education and promotion

Kimjang, or winter Kimchi making knowledge, like what ingredients to use and knowing the process to preserve the Kimchi has been orally transmitted at home among women for centuries. In addition to this everyday living and informal transmission of knowledge, regular types of education are being offered on Kimchi making.

Following is the definition and introduction to the proposed cultural heritage of Kimjang in the application for UNESCO registration.

<Definition and introduction to the proposed cultural heritage Kimjang>

Kimjang related knowledge and expertise are being transmitted through school educational programs. From elementary schools, the Korean students learn about Kimchi and the practices of Kimchi making. As low as at the kindergarten level, there are very basic kinds of Kimchi making classes. Students are then given the Kimchi they make, and the kids can get used to the hot pepper taste of Kimchi as well. At junior high and high school levels, students learn a more full-version of the Kimchi making process.

There are many government and private Kimchi museums nationwide where historical changes of Kimjang and regional practices of Kimchi making are being exhibited. Korea became a multi-al country and foreigners living in Korea learn of Kimjang from their neighbors. For them, learning to make winter Kimchi provides a good opportunity to learn of everyday living in Korea.

Developing programs that will improve Kimchi making vocational training, offer youth Kimjang culture education programs, and others that local governments can provide are proposed as a worthwhile follow-up to the UNESCO application. Another idea worth serious consideration is to make the traveling Kimchi culture school as a regular program. With the exception of a few local governments, such activities are less active than desired. There are nationwide programs about Kimchi making that are sharing events for lower income citizens, however Kimchi education needs more attention. There are websites, such as 'Experience the Kimchi ingredients growing' and 'visit the Kimjang culture'. These websites provide information and tourism opportunities. People can visit salt ponds that provide salt for Kimchi making are part of the Kimjang culture.

'Experience Kimchi making' and Kimchi related educational programs should be expanded to overseas. For example to the Koreans and their descendants living in the Soviet Union and in China, it is useful to utilize the Education Institutes Abroad (established by the Ministry of Education) to stay connected to their Korean heritage and culture. Presently, there are 38 Education Institutes Abroad in 16 countries: Japan (15), America (6), Russia (4), Central Asia (3), and other regions (10).

The increasing numbers of immigrant workers, multi-cultural families from international marriages, and North Korean defectors are creating a serious social problem in the future. Kimchi making classes would be an excellent program that may have a positive effect for social and cultural integration. It in turn would bring a re-evaluation of Kimjang culture's values and help solidifying Korea's cultural identity. It may also lead to building a network for uniting Koreans all over the world.

3. Promoting discussions among communities, groups, and individuals

The number of items on UNESCO's registration application shows the importance of community in Intangible Cultural Assets. The application form asks for a detailed explanation as to how much the community

concerned is actively engaged in the enactment and execution of protective measures. If the concerned community has played a positive role in the decision for applying for the registration and participated in preparatory activities, then there is a good chance that the cultural heritage will and can continue. At the 8th Intergovernmental Committee meeting for screening held in Baku, Azerbaijan in December 2013, it was clearly stated that ‘community’ is not limited to the community directly related to cultural heritages. ‘Community’ has a wider meaning and scope that encompasses those who appreciate, observe, and transmit it, that heritage constitutes not only identity, but also those who are interested in the continuation of the heritage. Discussions about how to communicate with an international society using Kimjang culture is believed needed.

The operational directives for the implementation of the Convention for the safeguarding of the Intangible Heritage (Clause 79) state that the Convention parties are to make an effort to set up a functional, reciprocal, and supplementary cooperation system among various entities related to the intangible heritage. This includes the community concerned. It is advised that the Convention parties share knowledge and information of their cultural heritages. This will require a system that provides knowledge and information on a permanent basis. In addition, ‘a Kimjang culture network’ linking Koreans all over the world is believed worth consideration

<Location and geographical scope of the cultural heritage>

Kimjang is practiced all over Korea. Even Koreans living overseas make Kimchi if the ingredients are available where they live. Though there are differences from region to region, the basic ingredients of Kimchi are more or less the same. As Kimchi constitutes significant part of the Korean culture, overseas Koreans living in China, Japan, and other countries are making winter Kimchi, and it has influenced the food culture of the countries they live in. There are cases, where overseas Koreans have combine Kimchi with the local food, and it led to the creation of a new type of Kimchi or new Kimchi based menu.

The communities concerned need to actively communicate with the government on various matters regarding the transmission of cultural heritage and persuade the government that safeguarding cultural heritages is a government's responsibility. A system of ensuring community participation in decision-making is also a matter of urgency.

4. Laws for safeguarding and activating a Intangible Cultural Heritage

Based on research, education, and promotional plans, the central government, local governments, related organizations, communities, and groups should work together on how to continue and activate the Kimjang culture. It is advised that related laws be enacted based on enough research and discussion.

The current cultural property protection laws of Korea are to designate individuals, groups, or communities for any new Important Cultural Property. Therefore, Kimjang for which no particular individuals, groups, or communities can be designated as a transmitter does not qualify it to be an important intangible cultural property. The Cultural Heritage Administration is working on the enactment of 'laws on the preservation and promotion of intangible cultural heritage', which will provide for those intangible cultural heritages that have 'no transmitter designation'. Currently, financial supports for transmitter groups are based on the cultural property protection law. Therefore, funding for academic research on Kimjang culture, Kimjang events, transmission groups, or communities is possible only after the new law is enacted.

Since the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage was ratified (October 17, 2013), Korea has needed to have a more elaborate protection measure for its intangible cultural properties. Reflecting on the Convention's classification system (Clause 2), the new cultural heritage laws of Korea included oral traditions and expressions, social practices, rituals and festive events, knowledge and practices concerning nature and the universe, traditional craftsmanship, traditional music, and performing arts. Instead of adhering to the principle of the preservation of original form that is mentioned in

Clause 32, the new law has accommodated the transmission of a cultural heritage through generational transmission among the public.

However, it is regrettable that the new law does not include what was stated in the application for the registration: the importance of people's respect for intangible heritage, community participation, and its execution of safeguarding the cultural assets after the registration.

It is advised that the new law include supportive measures for communication strategies. It is not simply a matter of expanding UNESCO's intangible cultural heritage registration, but to ensure that more discussion and action is taken on a fundamental level that ensures the restoration of culture to the transmission community.

Review on Uniqueness of the Origin of Kimchi Based on the Process of Development

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1. Introduction

The oldest record about the pickled vegetables in existence is the phrase from 『Shījīng(詩經)』 (B.C. 10th to 7th centuries), “There is cucumber in the field, so I peel them and preserve raw cucumber by mixing it with spices or salt to serve(獻) ancestors(祖).¹ I have seen many literatures concluding that kimchi originated from jeo*(菹) of China, due to the need to depend on literatures to track the history. Applying this simple logic, all pickled vegetables of the world originated in China.

However, accepting the theory on the Chinese origin without criticism as there is no apparent persuasive ground for other theories might halt academic development, while denying the theory is causing a constant controversy as it is extremely difficult to provide the evidence. That is why we need to take the approach based on the cultural history to seek the answer from the cultural origin, when we explore the origin of the intangible culture that is difficult to be proved. Differentiated patterns of the culture are formed according to tastes and responses of particular groups or ethnic groups to the given conditions, and the cultures are included to and integrated with the mainstream cultures through the process of cultural unity where uniqueness of ethnic groups is further reinforced and members of the ethnic groups are emotionally united.



1_ 『詩經』, (影印) 文淵閣四庫全書, 臺灣商務印書館, 1983.

『詩經』《小雅》「信南山」.“中田有廬 疆場有瓜 是剝是菹 獻之皇祖 曾孫壽考 受天之祜.”

In this sense, the cultural origin can be interpreted as the origin(始原) of a new system, which is unique in its own and different from the existing system and has the same meaning as the emergence of cultural uniqueness. That is why difference(差異) instead of superiority(優劣) of cultures is accepted and we can respect cultural diversity. In this sense, we need to highlight how different characteristics of the cultures formed are, how the cultures have been formed and when the cultures have been formed to find out the cultural origin.

To find out the origin of kimchi, we need to prove the uniqueness of kimchi compared to other pickled vegetables of other cultures by highlighting cultural factors as well as technical factors such as the method of making and preserve through a cultural research methodology, and there are two pre-conditions to prove the uniqueness. First is the technical and physical difference, and second is the cultural identity of the ethnic group that needs to be based on the former.

More notably, finding out the cultural origin of kimchi is such an important mission, and is completely different from previous studies. For this purpose, we need to first figure out how pickled vegetables of China are different from pickled vegetables of the Korean peninsula, and then identify from when and how such differences have been developed. I believe that identifying the upper limit of the systematic difference and the characteristics will be an approach to the cultural research on the cultural origin of kimchi.

I mentioned that the major difference between kimchi and pickled vegetables of China is originated from types of major chimchaewon *(the material used to preserve other ingredients) and differences of types of preservation caused thereby in my publication titled “Development of Kimchi in the Joseon Period (Minsokwon, 2013).” The publication concluded, through the analysis on various literatures of Korea, China and Japan, that China has the food culture of chosanjeojang* (preservation using acetic acid, 醋酸貯藏) with the alcohol-based preservation method using liquors and vinegar, while Korea has the food culture of jeotsanbalhyo*(preservation using lactic acid, 乳酸醱酵) with

the salt-based preservation method using jang and salt.

More pickled vegetables of China are made using the chosanjeojang* method than fermentation. Chosanjeojang(醋酸貯藏) refers to the method of preserving vegetables by drying or cooking vegetables to dehydrate or prevent activities of microorganisms for longer preservation and then applying acetic acid with strong sterilizing power. As respiration is not made, foods processed using the chosanjeojang method can be kept and sealed in a porcelain(磁器) pot or a glass jar for prevention of decomposition.

On the contrary, pickled vegetables of the Korean peninsula are made to be preserved and “fermented.” By using raw vegetables or pickling vegetables, fermentation of lactic acid is induced while vegetables are preserved. In addition, use of onggi*(甕器), the traditional storage of Korea with air permeability, emits CO₂ discharged during the fermentation process and prevents abnormal fermentation caused by O₂, optimizing the fermentation process.

As seen in the above, kimchi of Korea and pickled vegetables of other cultures are both pickled but do not have other similarities.

This article aims to identify the cultural origin to see how kimchi, the pickled vegetables of Korea, has developed its uniqueness(製風) mentioned above. Pickled vegetables of Korea are referred to as kimchi, while those of other cultures are referred to as pickled vegetables, as I concluded that kimchi needs to be distinguished from other types of pickled vegetables due to its uniqueness.

2. Unique Characteristics of Kimchi of the Korean Peninsula

It was previous mentioned that China has the food culture of preserving vegetables using acetic acid and Korea has the food culture of preserving vegetables using lactic acid. As this article aims to identify the origin of

the systematic difference between two cultures, it would be appropriate to examine the recipes of pickled vegetables included in recipe books of or before the Middle Ages. 『*Qiminyaosu*(齊民要術)』, the best recipe book in existence of China(賈思勰, B.C. 5th to 6th century) includes many recipes well illustrating characteristics of pickled vegetables of China, and 『*Geogapiryongsaryujeonjip*(居家必用事類全集)』 unknown authorship, 12th century) written in the Yuan Dynasty practically and theoretically affected food cultures of Korea and China so much that there were many quotes in recipe books of both China and Joseon written ever since. Accordingly, we can identify how pickled vegetables of China, described in the above two publications, are different from kimchi of Korea, described in recipe books of the Joseon Dynasty.

The first standard for classification is the type of fermentation according to the type of the material used to make chimchae*. Vegetables pickled using vinegar or liquors are classified into the fermented foods using acetic acid, while vegetables pickled using salt or jang are classified into the fermented foods using lactic acid.

Second, pickled vegetables are classified into chimji* and beomurim* (mixing) according to the techniques of handling. The process of making the material for chimchae first and then adding ingredients to the material is called chimji, while the process of making the material for chimchae and mixing it with ingredients is called beomurim. In addition, the process of making chimchae using suljigemi, liquors, vinegar, jang or salt is classified as chimji, as the materials are used to better preserve ingredients despite the different applications. The process of making separate seasonings or jeupjang for pickling and mixing them with other ingredients, including the process of making kimchi, is classified as beomurim.

Third, pickled vegetables are classified into hamjeo*(鹹菹) and damjeo*(淡菹)² according to the content of moisture, and classified into geonji*(solid ingredients) and eumyong*(solid ingredients and soup) again according to whether the materials used for pickling are edible.



2_ Damjeo includes both pickled vegetables with edible soups and pickled vegetables with solutions which are edible but used to pickle vegetables.

Fourth, the differences between pickled vegetables of two countries include whether the vegetables to preserve are cooked(熟菜) or raw(生菜), although the fourth standard is not described in Table 1.

Table 1 Table of Categorization of Pickled Vegetables of Korea and China Based on 『Jeminyosul』 and 『Geogapiryongsaryujeonjip』

Categories according to processing techniques		Chimji-type			beomurim-type	
Categories according to types of pickling		Hamjeo-type	Damjeo-type			
Categories according to types of eating		Geonji (solid ingredients of soup)	Geonji (solid ingredients of soup)	Eumyong-type (solid ingredients and soup)	Eumyong-type (solid ingredients and soup)	Geonji (solid ingredients of soup)
Categories according to the purpose of pickling	Preservation using acetic acid	A	B	C	D	E
		㉔Jeochaeh made by pickling ingredients using suljigemi	㉔Jeochaeh made by pickling ingredients using liquor and vinegar ㉔Pickled vegetables in vinegar (ginger and garlic only)	×		㉔Je (齋)
	Fermentation using lactic acid	F	G	H	I	J
		㉔Jeochaeh made of grain porridge and yeast ㉔Jangajji made by pickling ingredients using jang and sal		㉔Dongchimi ㉔Nabak Kimchi ㉔Ganjang Kimchi	㉔Jeupjeo ㉔Japjeo (雜菹, Seokbakji-type) ㉔Sungjeo (菰菹, Baechukimchi) ㉔Kkakddugi, Chonggak Kimchi etc.	

These four criteria are based on whether the purpose of pickling is preservation or fermentation. If the fermented chimchaewon like vinegar or liquors is used, the secondary fermentation process does not occur. Accordingly, cooked vegetables are sealed and preserved, of which the primary pupose is to better preserve the vegetables. If salt or jang is used as chimchaewon, the fermentation activity needs to be continuously made after pickling the vegetables. Accordingly, fresh vegetables are used and the pickled vegetables are stored in onggi to maximize the effect of fermentation.

Comparison of pickled vegetables of China and Korea in Table 1 based on the above criteria is as follows:

23 out of 37 types of jeochae* in 『*Qiminyaoshu*(齊民要術)』, which account for 62%, are pickled using vinegar, ume juice as an acidulant and liquors, and only two types of jeochae are pickled using jang made of beans. In 『*Geogapiryongsaryujeonjip*(居家必用事類全集)』, 16 out of 35 pickled vegetables, which account for 46%, are pickled using vinegar or liquors, salt is used for one type of pickled vegetables and dujang (豆醬) is also used only for one type of pickled vegetables. Three types are made using fresh vegetables, and 32 types are made using sukchae*



<Chart 1> Pao Chai Pot (left) made of porcelain and Kimchi Pot made of Onggi (right)
<photographed in October 2014>

(熟菜) [je (齏) E]³ Sukchae is cooked or sun-dried and preserved vegetables. As the fermentation process is suspended while drying or cooking vegetables, sukchae is used to be sealed in a porcelain pot and preserved. It is clearly different from pickled vegetables of the Korean Peninsula, which are made by mixing fresh vegetables with solutions and fermenting the mixture in an onggi pot with air permeability. Most of Group A and Group B of 『*Qiminyaosu*(齊民要術)』 are made by cooking or blanching vegetables, and about 16 types are made by cooking vegetables.

On the contrary, only two types of kimchi are made by cooking or blanching vegetables in Korea, according to the recipe books of the Joseon period and earlier periods. The two types include eggplant or cucumber kimchi made by using the soy sauce in summer and special sukkimchi for elderly.

Classifying pickled vegetables in recipe books according to the processing techniques, beomurim (I) type of kimchi made by preparing chimchaewon* and mixing it with vegetables is mostly made in the Korean peninsula. In China, the pickled vegetables which are classified as damjeo types according to the type of eating are mostly geonji type (B), while eumyong types (H & I) including solid ingredients and edible soup with lactic acid made through fermentation are mostly made in the Korean peninsula.

Accordingly, we can conclude that most of kimchi of the Korean peninsula is eumyong types with chimchaewon as edible soup, and has improved preservability by fermenting fresh vegetables using lactic acid in chimchaewon. Salt and jang*(醬) are used as major chimchaewon, and additional chimchaewon like seasonings made of assorted spices or jeupjang are prepared when making the beomurim type of kimchi. The eumyong type with a large amount of soup takes a large portion in the chimji type of kimchi. The difference is attributed to the fact that kimchi



3_ Je (齏), which was popular in Tang and had lasted until Song, was considered as pickled vegetables. Writers of the Joseon period had no idea about what je looked like, as it was a Chinese term. They defined vegetables mixed with various seasonings as je. According to Yu-Gu Seo, je is made by cooking ingredients. Jeupjeo is included to je. According to Aeongakbi (雅言覺非, Yeoyudangjeonso (與猶堂全書) 第1集 雜纂集 第24卷) of Yak-Yong Jeong, je is described as a Chinese food like seasonings, which is equivalent to finely chopped kimchi (菹, 沈菜) of Korea.

has been made to maximize lactic acid bacteria through secondary fermentation. Gukmul kimchi* of the eumyong type like Dongchimi and Nabak kimchi* is also unique, but this study focuses on how techniques of making the beomurim type of kimchi have been developed to examine the cultural origin of baechu tongkimchi, which represents kimchi today.

3. The Clue of Assumptions on Uniqueness of Kimchi: Jeupjeo(汁菹)

While collecting data to diachronically find out the answer to the cultural origin of unique fermented pickled vegetables like kimchi, I focused on an interesting value.

According to literatures on agriculture, encyclopedia and recipe books published for over 500 years from 『*Sangayorok*』 (Sun-Eui Jeon, about 1450), which is the oldest recipe book in existence and was written in the Joseon period, to those written in early 1900s, recipes of jeupjang (汁醬) or jeupjeo*(汁菹) were continuously included as kimchi. They are types of kimchi which have been maintained in Sub-Chungcheong areas as local foods,⁴ and their recipes are not easily found in recent publications, failing to gain attention.

Recipes of Jeupjeo are not covered in recipe books any more, but most recently, jeupjeo was still inherited in some main houses as traditional fermented family foods, according to a research, jointly conducted by World Institute of Kimchi and Naver in 2014. Jeupjeo is prepared specially to treat elderly.⁵ For your reference, jeupjang is cucumbers and eggplants pickled in doenjang*. What is particular with jeupjang



4 _ “The volume on folk foods” of 『Comprehensive Korean Forklore Survey Report』 (National Research Institute of Cultural Heritage, 1984) introduces jeupjang as local foods of Yesan of Chungcheongnam Province; Jeonju, Iksan, Naju and Sunchang of Jeolla provinces; and Jinyang and Miryang of Gyeongsang provinces.

5 _ Five out of 12 main families (Family of Gyeong-Jung Park of Naju, Family of Yean Lee of Asan, Family of Milseong Son of Miryang, Family of Eunjin Song of Daejeon and Family of Andong) have made it as traditional family foods.

is that special mejujang is prepared to make jeupjeo, instead of using conventional doenjang. Jeupjang is made by preparing the special mejujang by mixing beans, wheat bran, grain powder or rice; mixing the mejujang with vegetables like cucumber and eggplants; and leaving the mixture for up to three weeks. It would be appropriate to classify jeupjang as jangajji* or jang rather than kimchi.

Whether jeupjeo should be classified as kimchi or jang has been a controversy since the Joseon period. Names of jeupjeo slightly varied by recipe book. Some recipe books described jeupjeo as “jeupdihi” or “jeupjihi” by attaching the old terms of kimchi, “dihi” and “jihi” to jeup. Some recipe books described jeupjeo as “jeupjyang” or “jipjang” as derivatives from jeupjang(汁醬).

Some records classified jeupjeo as kimchi(菹), regardless of terms (jeopjang or jeupjeo), and some records classified jeupjeo as jang(醬). Jeungbosallimgyeongje (Jung-Rim Yu, 1766) classified jeupjeo as both jang and kimchi, presumably as the particular jang(醬) had to be prepared to make jeupjeo and jang(醬) as chimchaewon was as important as vegetables in jeupjeo.

This study, for convenience sake, considers jeupjeo as an extended form of kimchi, and collectively describes it as jeupjeo(汁菹). The study describes particular daedujang*(專用 大豆醬) for jeupjeo as jeupjang(汁醬). Table 2 shows the most common, phased process of making jeupjeo, which can be identified through literatures.

Table 2. Time of Making Jeopjeo and Recipe

Items	Most Common Method		Remarks
Time	July 15th through September (after harvesting barleys)		April and May
Recipe	Step 1: Making meju for jeupjang	Make meju by mixing beans and wheat bran	Barley powder and malt can be added.
	Step 2: Making jeupjang	Complete jeupjang by making meju powder and mixing the powder with brine.	Various vegetables to add spices (spring onions, garlics and ginger) and other spices (sesame oil, sesame and soy sauce) are increasingly used in addition to brine.
	Step 3: Preparing vegetables	Prepare fresh vegetables like eggplants, cucumber and white gourd	Types of vegetables used are diversified, including green peppers and pumpkins.
	Step 4: Completing jeupjeo by mixing vegetables with jeupjang	Put a layer of vegetables and thinly cover the layer with jeupjang in a pot. Repeat the process to fill the pot.	
	Step 5: Fermenting	Leaving the pot in warm horse droppings or manure for three weeks	The period of fermentation ranges from one week to four weeks.

The recipe in Table 2 is the recipe developed by including essential steps from literatures from 『*Sangayorok*』 (Sun-Eui Jeon, about 1450), which is the oldest recipe book in existence, to the local survey data in 1900s.

According to the recipe of jeupjeo in Table 2, jeupjang has to be made first. To make jeupjang, meju for jeupjang needs to be prepared. Meju* for jeupjang is made by mixing beans with wheat bran and steaming the mixture, unlike meju for doenjang. Compared to meju made only of beans, meju for jeupjang is assumed to slow down the pace of

fermentation as it has microorganism in wheat bran. At the later period, barley powder and malt were used.

Second, meju is made as powder and mixed with brine when making jeupjang with meju for jeupjang. We can add flour or yeast and then add rice. The recipes of jeupjang have been diversified to include vegetables to add spices like spring onions, garlicks and ginger, as well as other spices like sesame oil, sesame and the soy sauce.

Third, leaves, which are widely used to make jangajji like perilla leaves and bean leaves, were not used at all to make jeupjang, and hard and thick vegetables like eggplants, cucumber and white gourd were used. The ingredients have been diversified to include white gourd, pumpkins and green peppers.

Finally, a layer of vegetables is put in a pot and covered with jeupjang. This process is repeated and then the pot is sealed and put in horse droppings or manure to be kept warm. The pot is left for about three weeks. As wheat bran is used and the vegetables are fermented at a high temperature, it takes only three weeks for fermentation. The balance of the rich flavor and the sour flavor is determined according to the amounts of beans and wheat bran used. The higher the amounts of wheat bran used, the sourer the vegetables are. The fermentation process was shortened in the late Joseon period.

We need to distinguish jeupjeo with jangajji of today, in a sense that the particular chimchaewon is prepared and mixed with fresh vegetables to make jeupjeo. We can see that the basic steps from the recipe of jeupje in Table 3 has been maintained, but the process has been more complicated, according to the recipe books of the 18th and 19th centuries when the culture of making jeupjeo was most developed.

Table 3. History of Recipes of Jeupjeo

Time	Meju for jeupjang	How to make jeupjang	Additional ingredients	Remarks	Sources
Before the 16th century	Beans + wheat bran Beans + wheat bran + barley	Meju powder + brine Meju powder + salt + yeast + flour + liquors	Eggplants Cucumber	Bean powder was used for some cases. 『Saekgyeong』	『Sangayorok』 『Suwunjanpbang』 『Sasichanyocho』 『Saekgyeong』
	×	Soy sauc + wheat bran (for summer)			
17th century	Beans + wheat bran	Meju powder + brine Meju powder + salt + yeast + flour + liquors 『Jubangmung』	Eggplants Cucumber		『Yorok』 『Jubangmun』
18th century	Beans + wheat bran	Meju powder + brine	White gourd Eggplants		『Somunsaseol』
	Beans + wheat bran	Meju powder + brine Meju powder + salt + stir-fried sesame + cheongjang	Eggplants Cucumber White gourd		『Jungbosallim yeongje』 <Imwon> Directly used in <Oju>
	Stir-fried barley + stir-fried beans + water used to wash rice	Meju powder + Gamcheongjang 『Jeonjubang』			
	×	Soy sauce + wheat bran (for summer) Soy sauce + malt powder (for summer)			

Time	Meju for jeupjang	How to make jeupjang	Additional ingredients	Remarks	Sources
19th century	Beans + wheat bran Beans + barley powder Beans + wheat bran + yeast	Meju powder + brine Meju powder + honey + sesame oil + boiled jang 『Gyuhapchong seo』 Meju powder + malt + honey + oil + soy sauce 『Jusikbang mun』 Meju powder + sesame oil + Boiled jang 『Jusiksieui』 Meju powder + salt + green peppers + garlics + ginger + akane 『Eumsikbang mun』 Spring onions + garlics + soy sauce + boiled sesame oil 『Onjubeop』 Glutinous rice + soy sauce + salt + (cayenne powder) 『Sieujeonseo』	Eggplants Cucumber White gourd Green peppers Gourd Pumpkins Fermented mukimchi	Fresh vegetables are used. Pickled and applying hot water before use 『Jusiksieui, Sieujeonseo』 Honey is added when served.	『Onjubeop』 『Gyuhapchong seo』 『Jusokbang mun』 『Jusiksieui』 『Eumsikbang mun』 『Eumsikchaek (Danyangdaek)』 『Juchan』 『Sieujeonseo』
20th century	Stir-fried flour + stir-fried beans + water used to wash rice	Meju powder + soy sauce	Eggplants Cucumber		『Buyinpilji』 『Haedongjuk ji』 ⁶

6_ Special product of all villages in Hoseo area is used to make jang. Eggplants, cucumber, garlics and ginger are soaked in the jang and fermented in a stack of straws.

In particular, vegetables to add spices like spring onions, garlicks, ginger, akane and cayenne pepper as well as ingredients to add nutty flavors like sesame oil and soy sauce are used to make jeupjang with meju for jeupjang* in the 18th century and the 19th century. Ever since, jeupjang for jeupjeo has gotten closer to kimchi seasonings used to make Seokbakji* or baechu tong kimchi*. Vegetables used to make jeupjeo, are also pickled in brine and then washed with water(退鹽), instead of fresh vegetables, which is similar to vegetables prepared to make baechu tong kimchi.

To introduce one more similarity to the today's kimchi recipe, chimchaewon used to pickle vegetables was prepared for pickling vegetables, instead of soaking vegetables in doenjang or soy sauce, like jang kimchi or doenjang jangajji. Given the fact that jeupjang as a special jang(專用 醬) for jeupjeo is prepared through fermentation and then is mixed with pickled vegetables and fermented again, jeupjeo can be classified as a type of kimchi made through the secondary complex chimchaebeop combining the chimchaebeop for fresh vegetables and the chimchaebeop with seasonings. Its ingredients or recipes have similarities to baechu tong kimchi which represents kimchi today. In other words, we can assume that the recipe of kimchi made through the chimchaebeop for the secondary fermentation using lactic acid, by using fresh vegetables and seasonings as chimchaewon has been completed since kimchi in the form of jeupjeo was prepared.

Table 4. Types and categories of jeo(菹) in national memorial service dictionaries of China and Korea

	Titles of literatures	菁	芹	韭	筍(笋)	葵	箬	茆	蒲	薑	脾析	雜菹
	Ingre dients	Radi sh	Water p a r e s l e y	Chiv e s	B a m b o o s p r o u t s	C u r i e d m a l l o w			Typha o r i e n t a l i s	G i n g e r	Beef o m a s u m	Others
China	Jurye (주례)	菁菹	芹菹	韭菹	筍菹	葵菹	箬菹	茆菹	蒲齋		脾析齋	
	Suseo (수서)			韭菹		葵菹			蒲菹	薑菹		
	Daeda ngrye (대당례)	菁菹	芹菹	韭菹	笋菹	葵菹					脾析菹	
	G e u m s a (금사)	菁菹	芹菹	韭菹	笋菹	葵菹						
	W o n s a (원사)	菁菹	芹菹	韭菹	筍菹	葵菹					脾析菹	
	Goryeosa (고려사)	菁菹	芹菹	韭菹	筍菹	葵菹					脾析菹	
China	Myeo ngsa (명사)	菁菹	芹菹	韭菹	筍菹							
	Cheo ngsa (청사)	菁菹	芹菹	韭菹	筍菹							雜菹
	Sejongoryeeui (세종오례의)	菁菹	芹菹	韭菹	筍菹							
· 『The Birth of Kimchi in the Joseon Period』 (Chae-Lin Park, 2013), p55. Table 4. for personal uses												

Table 5. Jeo(菹) from definitions of formality of 『Goryeosa』

區分	位置	菹類	醃類		
園丘・社稷	第1行	芹菹 筍菹 菁菹	4 種	脾析	7 種
	第2行	韭菹		醃食 魚醃	
	第3行			豚拍 鹿醃 膾醃 糝食	
太廟	第1行	韭菹 菁菹 芹菹	4 種	醃醃 鹿醃	7 種
	第2行	笋菹		魚醃 脾析菹 豚拍 醃食 糝食	
	第3行				
風・雨・雷・靈	第1行	芹 笋菹	5 種		
	第2行	菁菹 韭菹 葵菹			
	第3行			魚醃 鹿醃	2 種

・Chae-Lin Park, 『Roots of Joseon Dynasty Kimchi』, 2013. p. 75.
<Table 9> for personal use

4. Is radish kimchi in the poem of Gyu-Bo Lee, the poet of the Goryeo period, ganjang* kimchi or doenjang jangajji?

The reason why I mentioned specifically about jeupjeo in the above is that the secondary complex chimchaebeop provides a firm ground for the unique origin of kimchi, and that it is the recipe of baechu tong kimchi which represents kimchi. If kimchi made with jang as chimchaewon in the Goryeo period in three poems is jeupjeo(汁菹), we can say that the unique kimchi recipe of Korea was completed before the Goryeo period, and has been developed to the today's recipe as new ingredients like Chinese cabbages and cayenne pepper were added in the late Joseon period. Accordingly, when jeupjeo was made first is such an important issue in proving when the unique kimchi recipe of Korea was first developed, as it is assumed that pickled vegetables of Northeast Asian countries in the ancient times were similar.

There are not many references providing data about the origin of kimchi of Korea, and the record about five types of jeo(菹) in 『Goryeosa』 and 『Gapoyugyeong』 of 『Donggukisanggukjip』 have provided valuable information for the historical origin of kimchi. The information from 『Goryeosa』 is a manual defining rules on foods for national memorial services. As the recipes are based on 『Daedanggaewonrye 大唐開元禮』,⁷ the recipes may be different from those for foods people of Goryeo actually had in their everyday life (Refer to Table 4 and Table 5). We can only assume that pickled vegetables made of five vegetables, including cheongjeo(青菹, radish), Gujeo(韭菹, chives), Sunje(筍菹, bamboo sprouts), Geunjeo(芹菹, water parsley) and Gyujeo(葵菹, curled mallow) might have exist in the Goryeo period.

The oldest literature providing the details of kimchi Koreans actually had is a poem titled 『Gapoyugyeong(家圃六詠)』 of poet Gyu-Bo Lee (李奎報, 1168~1241). We can assume what kimchi of the Goryeo period was like when we see the below paragraph describing radish(菁) from 『Gapoyugyeong』.

① Radish kimchi pickled in jang for summer

得醬尤宜三夏食	Pickled in jang, perfect for summer
漬鹽堪備九冬支	Pickled using salt, ideal for long winter
根蟠地底差肥大	When roots under the ground grow bigger
最好霜刀截似梨	Cut them with a sharp knife as if they are pears

- 『Donggukisanggukjip』 卷4 『Gapoyugyeong』

Previous studies on the history of kimchi had agreed to interpret ‘Deukjangwueuisamhasik(得醬尤宜三夏食)’ as a type of jangajji and ‘Jiyeomgambigudongji(漬鹽堪備九冬支)’ as a type of dongchimi* or mujjanji*. The Institute for the Translation of Korean Classics also interpreted Janggwa*(醬瓜) in the poem of Mogeun Saek-Lee describing kimchi of the Goryeo period as cucumber jangajji.



7 _ The literature describes funeral services(禮制) in the period of Gaewon(開元) of the Tang(唐) dynasty and was written by Sochu(蕭樞) and other writers upon the Emperor's direction. The literature is called ‘Danggaewonrye(唐開元禮)’ or Gaewonrye. Gaewon is the name of Emperor Xuanzong(玄宗) of the Tang Dynasty. (『Korea classic term dictionary』, King Sejong Memorial organization, 2001)

I have also assumed that the above two cases provide the background information about the origin of kimchi of Korea with salt and jang as two main chimchaewon. I had assumed and made recommendations that jang might be jang kimchi or jangajji⁸ made by using the soy sauce or doenjang made of beans.⁹ However, I did not consider the fact that diverse types of kimchi made by using jang(醬) existed in the Korean peninsula. As recipes and periods of preservation of kimchi varied by type, the matter had to be comprehensively studied, considering the history of change and evolution of kimchi.¹⁰

1) The theory on ganjang(soy sauce) kimchi

Let's assume that how the kimchi might have been prepared if it is made of the soy sauce. There are two types of recipes for making kimchi with the soy sauce as chimchaewon according to old recipe books. First, ingredients were cooked or the soy sauce was boiled to deeply soak ingredients in the soy sauce. This type of recipe is called "Sukchae-type sobagi jang kimchi recipe." Second, the soy sauce was mixed with the soup of nabak kimchi to make kimchi. This type of recipe is called "nabak kimchi-type jang kimchi recipe."

The former was titled "Sukchae-type*", as ingredients were boiled or cooked, although recipes of the early Joseon period and those of the late Joseon period were very different. In the early Joseon period, cucumber or eggplants were boiled or soaked in the boiled jang, and spring onions and garlicks were added to preserve the kimchi for a longer period of time. The shape of vegetables was "sobagi*" which refers to making cuts to cucumber or eggplants for jang and spices better soaked into the ingredients and then putting spices into the cuts. Since the 17th century,



8 _ According to the definition of the National Institute of the Korean Language, Jangajji refers to "the foods made by soaking vegetables like cucumber, radish and garlicks in the soy sauce, brine, doenjang or gochujang, preserved for a long time and seasoned and served in a small amount."

9 _ CL Park, 『Roots of Joseon dynasty Kimchi : a deep, wide study of culture, cuisine and folklore』, Misokwon, 2013, pp79~84.

10 _ As jang kimchi made using the soy sauce and a large amount of soup easily goes bad, ingredients and recipes are much more complicated.

meat as well as spices have been used to make seasonings of kimchi, and kimchi has been evolved into special dishes served with liquors. The shape of the kimchi in the 17th century and thereafter was quite different from that of conventional kimchi, but it was still included to the category of kimchi. Since the late 19th century, the type of kimchi has been classified as “sukjangajji” or seon*(膳).¹¹

Meanwhile, “nabak kimchi-type jang kimchi” has a large amount of soup, so it cannot be preserved for a long time. It is for instant serving or use in days. Chinese cabbages or radish are cut and soaked in the soy sauce. Vegetables to add spices and the soy sauce were added and fermented. It was a gourmet food garnished with additional ingredients like ear shells, sea cucumber, shiitake and chestnuts. As a small amount of thick soy sauce is added to mul kimchi* made of brine to add the fermented flavor, the flavor of the soy sauce determines the flavor of the food. This was the popular kimchi recipe in the late Joseon period. Cucumber was widely used in summer, and radish and Chinese cabbages were widely used in winter. As the kimchi was preserved for a longer period of time in winter, it was made with gimjang* kimchi and served before baechu kimchi was fully fermented.¹²

Jang kimchi, made with the soy sauce as chimchaewon, had to be used in days, and ganjang jangajji which can be preserved for a long time although the soy sauce is used as chimchaewon has not appeared in recipe books until the late 19th century. Tender vegetables like garlics, water parsley, hot pepper leaves and the heart of Chinese cabbages were used to make them better soaked in jang. The ingredients are soaked in the boiled jang and then jang is removed. The process is repeated several times, which indicates that this type of kimchi is an advanced version of kimchi.



11_ Oiseon, Gajiseon and Hobakseon are included. They are made by making cuts in cucumber, eggplants or pumpkins, put fillings in the cuts and making them fermented.

12_ CL Park, 『(A) literature review on the methods Kimchi made in the first half of the twentieth century』 Minsokwon, 2013, pp104~106.

Comprehensively studying the recipes of kimchi made with the soy sauce as chimchaewon, I concluded that it is highly likely that radish kimchi from 『*Gapogyugyeong*』 is “sukchae-type sobagi jang kimchi” of the early Joseon period, if it is a type of ganjang kimchi. Radish is blanched or cooked and then soaked in the boiled soy sauce. To better preserve and add flavors, vegetables like spring onions, garlics and ginger need to be added. The only jang kimchi which is not sobagi can be found in 『*Sangayorok*』, the recipe book of the 1400s, so the radish kimchi from 『*Gapogyugyeong*』 might not have the shape of sobagi. The kimchi made with the soy sauce as chimchaewon cannot be preserved for longer than a week, it has to be prepared frequently.

2) The theory on doenjang kimchi

When the expression “three months of summer” is interpreted as “preserved throughout the summer after making kimchi once” instead of “making and having jang kimchi several times throughout the summer,” the kimchi may be made by using doenjang, made of meju, as chimchaewon.

Doenjang has long been used in Korea, so kimchi made by putting vegetables in doenjang may have a quite long history. To put hard ingredients like radish to jang, the jang needs to be slightly thin for active movements of moisture and the active osmotic process, or vegetables need to be dehydrated well and put in the jang for a long time. Accordingly, ingredients with less moisture contents or dehydrated ingredients were widely used.

According to the chapter about the process of putting jangajji in gochujang* of 『*Sieuijeonseo*』, vegetables with less moisture contents or dehydrated or dried vegetables need to be put in the jang. These types of doenjang jangajji or gochujang jangajji do not need to be made only in summer. The vegetables freshly picked might have been used, and the jangajji completed can be used around the year.

Table 6. Vegetables Used to Make Gochujang Jangajji in 『*Sieuijeonseo*』

Vegetables	Translation in English (Korean)
Deodeok	Scratch to peel the skin, dry for a while and preserve in gochujang. Dried deodeok is chewy.
Songi	Wash, remove moisture and preserve in gochujang. Dried Songi is also used.
Radish	Put radish in a bowl and add ganjang leftover. Wash it in spring and preserve in gochujang.
Kimchi	Squeeze, wash and dry kimchi and preserve it in gochujang.
Cucumber	Wrap pickled cucumber with cloth, and dry and preserve it in gochujang with Oeji
Eggplants	Follow the same instruction as that for cucumber.
Green pepper	Remove the end of green pepper and put it in gochujang. It is also recommended to put it in doenjang.
Others	Fresh persimmon, tofu, ear shells, octopus, herrings, boiled meat, ginger, stem of garlics and Korean angelica.

Then how is the kimchi made of jeupjang, which is similar to doenjang, as chimchaewon? As above mentioned, jeupjeo was mostly made from July to September in the lunar calendar, and there were special types of jeupjeo for summer.

According to 『*Jeungbosallimgyeongje*』, it was recommended to put the jeupjeo pot in cold water in summer,¹³ which indicates that there were some know-hows for preservation of jeupjeo in summer. As seen in Table 2 and Table 3, jeupjeo is kimchi made from the early Joseon period to the late Joseon period. Considering the seasons, the periods of use and the degree of development of recipes, it is highly likely that chimchaewon of the jang kimchi in three pieces of poem of the Goryeo period is dujang*(豆醬) made of beans. It is likely that the dujang is jeupjang, which Koreans have used for a long time and is thicker than the soy sauce. Among various types of jeupjeo, I assume that it might be hajeol(夏節) jeupjeo*, which is made by mixing the soy sauce and wheat bran to make the porridge-like texture, mixing the mixture with vegetables and fermenting the mixture in a short time, which is the recipe for summer.

13_ The same description can be found in 『*Imwonsibyukji*』 and 『*Ojuyeonmunjangjeonsango*』, as both publications quoted 『*Jeungbosallimgyeongje*』.

The references about kimchi of the Goryeo period are very limited. The second clue indicating that chimchaewon of the jang kimchi of the Goryeo period is jeupjang is the use of Janggwa(醬瓜) in two pieces of peom of Mogeun Saek Lee(李穡, 1328~1396).

② I got cucumber jangajji as a get-well soon gift

夜深腰痛睡難安 I did not sleep well due to the back pain
 瓦片熨來心稍寬 Only hot stone massaging comforted me
 月上東窓鷄又叫 The moon rises in the east window and a cock crows again
 爽然如脫死生關 and my body and mind gets refreshed as if I am free
 from the issue of life and death
 病裏醬瓜如蜜稀 Cucumber jangajji was my No. 1 companion while
 I was sick
 老年堂姊小相依 My sister supported me much in my old days
 凌晨赤腳擎來送 Her maid brought jangajji in the early morning
 旅舍荒涼日照扉 The sun lights the twig gate of the lonely inn

- 『Mogeunsigo』 卷13 「Jeuksa(即事)」

③ I got cucumber jangajji as a gift

平日姻家密且親 My relatives are so friendly in ordinary days
 危時見面也無人 But no one visits me when I am sick
 誰將食物供朝夕 Who else can treat me breakfast and dinner
 可見夫人意甚真 I can see how much your wife takes care of me

- 『Mogeunsigo』 卷35 「Songmigeumjanggwa for Ms. Song, the
 Wife of Ga-Gwan Yun (尹可觀夫人權氏送米及醬瓜)」

We can see that janggwa from the peom of Mogeun was used as a gift. A food used as a gift is usually more valuable than ordinary foods, and needs to be easily carried. Accordingly, janggwa from the peom of Mogeun is highly likely to be jeupjeo, made of special meju, instead of simple jangajji made of doenjang, as ganjang kimchi carefully made

with various valuable ingredients has not been developed until the late Joseon period.

The fact that jeupjeo was kimchi used as a gift is proved by the below poem and letters. It is assumed that jeupjeo was used as a gift like kimchi made of valuable ingredients like sangat* kimchi and gamdongjeo* in the Joseon period.

④ I sent a varnished fan to Chung-Eui Shin in return as he sent me jeupjeo

(辛忠義送汁菹謝以漆扇)

不見辛君久 It has been long since I met Mr. Shin

秋深落木疏 Trees are all leafless in this autumn day

去年三斗酒 Three barrels of liquors last year

今日一缸菹 A pot of kimchi today

白首縻官務 I dedicate myself to work despite the old age

黃花阻野居 But hwanghwa blocked the way¹⁴

湖南漆竹扇 I am so ashamed that Chiljukseon of Honam

愧欠右軍書 is not matched with works of Wugun.¹⁵

- 『Dongakjip (東岳集)』 卷 18 「Gangdohurok(江都後錄)」

An-Nul Lee (李安訥, 1571~1637)

The below chart shows a thank-you letter sent by Fukumura Kenji (福村兼治) who served in Okcheon gun office in the Japanese colonial period to Chung-Geun Choi of Boeun. The letter is from the Independence Hall of Korea. Fukumura Kenji thanked Chung-Geun Choi for sending him jeupjang (汁醬), saying “I even violated the food consumption rule as I eat too much due to this delicious jeupjang.”¹⁶

Comprehensively considering the above facts, it is more likely that janggwa of the poem of Mogeun is cucumber jeupjeo made by making a special jeupjang and putting cucumber in the jeupjang, rather than cucumber jangajji made by simply putting cucumber in doenjang.



14 _ It can be interpreted as many ingredients of Hwanghwachae*.

15 _ Wugun can be interpreted as Wang Hee Ji (王羲之) who served as Wugun Janggun (右軍將軍) in the Qing (晉) dynasty.

16 _ Excerpted from the bibliographic data of the Independence Hall of Korea.

As previously mentioned, five out of 12 families surveyed in 2014 still make jeupjang for senior members of the families. According to the families, kimchi made of jeupjang was ideal for elderly as it is tender and juicy. The daughter-in-law of the eldest son of Gyeong-Jung Park's family in Naju told that she has not made jeupjeo since her mother-in-law died. She does not like the sour flavor, and her children do not have jeupjeo at all. It indicated that jeupjeo has been used only for special uses and made only in limited areas as seokbakji, eoyuk kimchi* and baechu kimchi which are types of kimchi made of fresh vegetables and seasonings become popular.

I have systematically verified the probability that three types of jang kimchi from 「Gapoyugyeong」 and 『Mogeunsigo』 are jeupjeo. These three references, which include details of uses of kimchi of the Goryeo period, all provide clues about pickled vegetables made using jang as chimchaewon. If these types of jang kimchi mean jeupjeo, as I assume, and the history of jeupjeo began before the Goryeo period, we can prove the fact that the foundation for the unique recipe of kimchi, which is the secondary mixed chimchaebeop combining the chimchaebeop using fresh vegetables and the chimchaebeop using seasonings, had been built a long time ago. Koreans do not widely make jeupjeo any more, but the recipes of jeupjeo have been reflected to the unique recipes of kimchi such as seokbakji and tong kimchi and maintained until today.



<Chart 2> The Thank-You Letter That Fukumura Kenji Sent to Chung-Geun Choi (Source: the Independence Hall of Korea)

5. How kimchi has been recognized, which can be found in the history of division of jeupjeo

As pickled vegetables made using fresh vegetables through the complex chimchaebeop inducing the secondary fermentation are kimchi made through the unique recipe, the system of recognizing only pickled vegetables within this category as kimchi is activated. Foods developed from kimchi but not in this category are gradually separated from kimchi in recipe books.¹⁷ There are exceptional types of kimchi which is made by heating, although fresh vegetables are fermented using lactic acid in Korea. The origin of the exceptional types of kimchi is related to jeupjeo. Kimchi made using cooked vegetables were developed to use jeupjeo, but they became foods completely different from kimchi in the later period due to the system of not recognizing kimchi made using cooked vegetables as kimchi.

17_ As I mentioned in 『Roots of Joseon dynasty Kimchi : a deep, wide study of culture, cuisine and folklore』, this is also proved by the classification system of Yu-Gu Seo in 『Imwonsibyukji』.

Table 7. Change of Recipes of Sukchae-Type Jeochaeryu* Made Using Soy Sauce as Chimchaewon

Time	Sources	Sobagi-Type		Ordinary Type		Remarks
		Vegetables to Add Spices Only	Including Meat	Vegetables to Add Spices Only	Including Meat	
15th Century	『Sanga yorok』	Gajeupjeo for summer (夏日假汁菹) Eggplant sobagi (茄子菹)		Jangjeo for summer (夏日醬菹)		
	『Suwun japbang』	Mojeomi (毛粘伊)				
17th Century	『Juchan (酒饌)』	Gwadam chimchae (瓜淡沈菜)	Oimureum (瓜物飲)		Ggwong kimchi * (生雉鹹菹) Dak kimchi * (生鷄鹹菹)	
	『Eumsikdi mibang』				Ggwong jjanji (生雉) Ggwong kimchi (生雉)	
18th Century	『Jubang mun』	Oegajiseon	Yakjihi			
	『Eumsikbo』	Gajiyakjihi				
	『Jeungbo sallim yeongje』	Hwang gwahaejeo (黃瓜醃菹**)	Garan (茄爛) Hwang gwaran (黃瓜爛)		Jangga (醬茄)	Hawolchimgajeo (夏月沈茄菹) Hwanggwadamjeo (黃瓜淡菹) Hwanggwahamjeo (黃瓜鹹菹) Hwanggwasukjeo (黃瓜熟菹) Hwanggwahaejeo (黃瓜醃菹)
	『Jusik bang』		Eggplant kimchi (horse droppings)			

Time	Sources	Sobagi-Type		Ordinary Type		Remarks
		Vegetables to Add Spices Only	Including Meat	Vegetables to Add Spices Only	Including Meat	
19th Century	『Ibwon sibyukji』	Gajeupjang (假汁醬)	Jangman cho(醬蠻椒) Janghwang gwa(醬黃瓜)	Various stypes using deodeok, spring onions and oriental melons (close to jorim)	Janggang sun	Dongwol jakgajeo (冬月作茄蒞)
	『Gyuhap chongseo』		Jangjjanji2		†Jangjjanji	
	『Sulbitne unbeop』		Jang kimchi ¹⁸			
	『Jusiksieui』		Jang kimchi			
	『Sieui jeonseo』		*Eggplant jjanji *Oeseon, Gajiseon, Hobakseon ¹⁹ †Jang kimchi		*Muwushuk jangajji *Oejangajji *Munal jangajji †Jangjjanji	Oekimchi (fresh vegetables) Eggplant kimchi (fresh vegetables)
20th Century	『Joseonyo rijebeop』 1921				Jangjjanji	Oesho kimchi (fresh vegetables)
	『Joseonyo rijebeop』 1937				*Oejangajji *Sukjangajji	Oesho kimchi (fresh vegetables)

- ▶ The symbol "*" refers to the cases where the authors of recipe books classified the item as side dishes other than kimchi.
- ▶ ** Hwanggwahaejeo made using both fresh vegetables and cooked vegetables is introduced.
- ▶ All recipe books written since the 1900s classify it as jangajji, seon or jjim.
- ▶ The symbol "†" refers to kimchi with seafoods instead of beef.
- ▶ Items in dotted boxes refer to the foods developed into cucumber sobagi of today, which is made using salt and spices only, instead of the soy sauce.

- 18_ Stir-fried cucumber + Sokbaji* (meat + ginger + spring onions + yujang* + crushed pine nuts + pepper)
→ Pour boiled and cooled jang soup (ginger + spring onions + seasonings + jangguk*) → It is recommended to add Seogi mushrooms + mushrooms + pears + jujube.
- 19_ Make cuts in pumpkins (cucumber or eggplants) → Sokbaji (stir-fry with beef, spring, onions, garlics, pepper, oil and honey + mushrooms, finely sliced dried red peppers, fried and finely sliced eggs)
→ Pour chojang*.

The clue about the relevance of jeupjeo and kimchi made using cooked vegetables can be found in 『*Sangayorok*』, the oldest recipe book in existence. We need jeupjang to make jeupjeo, and make meju for jeupjang, which is so complicated. To simplify the process, wheat bran is mixed with the soy sauce and then fresh vegetables are mixed with the mixture to make kimchi. To distinguish this with real jeupjeo made of jeupjang, it was called “gajeupjeo(假汁菹)” or “gajeupjang(假汁醬).”²⁰

As the soy sauce was not preserve longer than jeupjang, ingredients had to be sterilized by heating or cooked and vegetables to add spices like spring onions, garlics and ginger were used for better preservation. In addition, cucumber and eggplants which are harder than leaves were used, so the sobagi-type of making cuts to vegetables and inserting vegetables for spices into the cuts was developed for better preservation and more effective flavoring.

Sobagi-type ganjang kimchi was made as an simple alternative for jeupjeo, and sukchaebeop was introduced for better preservation. As meat improved flavors, meat was added to the seasonings(餡) of kimchi along with other vegetables to add spices.

According to Table 7, sobagi-type jang kimchi made of the soy sauce was first found in gajeupjeo for summer(夏日假汁菹) and eggplant sobagi kimchi(茄子菹) of 『*Sangayorok*』, and also found in mojeomi(毛粘伊), of 『*Suwunjabbang*』 of the same period and cucumber sobagi jang kimchi(瓜淡沈菜) of 『*Juchan*』 in the 17th century. Since the 17th century, meat has been included to sobagi-type jang kimchi, including oimureum(瓜物飲) of 『*Juchan*』, yakjihi of 『*Jubangmun*』, garan(茄爛) and hwangggwan(黃瓜爛) of 『*Jeungbosallimgyeongje*』, gochu sobagi jang kimchi(醬蠻椒) and janghwanggwa(醬黃瓜) of 『*Imwonsibyukji*』 and eggplant kimchi of Jusikbang. Meat was increasingly used to make jang kimchi according to recipe books of the 18th century.

20 _ YG Lee, 『*Joseonmussang sinsik yorijebeop*, (1924)』, The 『*Gajipjang*』 Volume.

In addition to the sobagi-type jang kimchi with meat, the chaesseolgi*-type of kimchi called ggwong kimchi was made, signalling development of a new type of kimchi. Ganjang kimchi of the chaesseolgi-type instead of the sobagi-type includes ggwong kimchi from 『Juchan』 and 『Eumsikdimibang』 of the 17th century, followed by jangga from Jeungbosallimgyeongje and janggangsund from Imwonsibyukji. Although ingredients were stir-fried with meat, terms meaning kimchi like jeo (漬) or jihi were used. These sukchae-type kimchi made using the soy sauce as chimchaewon, which are made differently from traditional kimchi, were categorized as sukjangajji, jjanji* and seon(餹) in 『Sieuijeonseo』 in the late 19th century.

Both kimchi made of fresh vegetables and kimchi made of cooked vegetables were included to kimchi and described as “kimchi” or “jeo(漬)” in recipe books until the early 19th century. However, such division of gajeupjeo was not matched with the original recipe of kimchi, and this sukchae-type gajeupjeo, in other words, meat sobagi-type jang kimchi, began to be distinguished from kimchi.

According to Table 7, since 『Sieuijeonseo』, the recipe book, was written in the late 19th century, cucumber and eggplant kimchi made using pickled fresh vegetables and other vegetables to add spices as so* (餹) have been classified as kimchi, while foods made by using cooked vegetables have been classified as other types of foods like jjanji, seon and sukjangajji.

Meanwhile, kimchi made with the soy sauce as chimchaewon was divided from gajeupjeo and developed into the sobagi-type sukchae jang kimchi and then into sukjangajji or seon to be special foods other than kimchi. However, jang kimchi made through the unique kimchi recipes was newly developed in the same period. It is nabak kimchi-type jang kimchi, which is made by pickling fresh vegetables, making nabak kimchi, and adding the soy sauce and a generous amount of seafood and nuts. It can be found in 『Gyuhapchongseo』 and 『Sieuijeonseo』 of the 19th century. The soy sauce is used as chimchaewon to add the fermented flavor and the salty flavor. As fresh vegetables are used, it is

called jang kimchi and classified as kimchi.

The process of the category of the sukchae-type jeochaeryu made with the soy sauce as chimchaewon being changed from kimchi to other types of foods well illustrates how Koreans recognize the scope of kimchi. It proves that Koreans recognize only the foods, which are made by mixing fresh vegetables or pickled vegetables with seasonings for beomurim, or making them as gungmul-type kimchi, and then fermented, as kimchi.

6. Conclusion

Some insist that kimchi originated from China, as jeo(菹), the Chinese term referring to pickled cucumber and was first found in 『Shījīng(詩經)』 of China, was used to name kimchi of the Joseon period, and China was the cultural hub of Northeast Asia from the ancient time to the pre-modern period. However, as I mentioned above, it is obvious that kimchi is unique compared to other pickled vegetables. Kimchi of the Korean peninsula is unique in a sense that fresh vegetables(生菜) are mixed with seasonings made especially to make kimchi, that the vegetables are fermented after being mixed with seasonings, and that solid ingredients and chimchaewon which is soup are edible.

Compared to pickled vegetables of other cultures which are not fermented as completely fermented chimchaewon like vinegar or liquors are used, kimchi of Korea maximizes fermentation using lactic acid by applying special seasonings like salt, jang(醬) and vegetables to add spices. Accordingly, Korea has developed gungmul kimchi of the beomurim-type or the damjeo-type. Other cultures may have pickled vegetables sharing one or two similarities with kimchi, but kimchi of Korea is unique in a sense that it has all those characteristics and it takes a large share of pickled vegetables of the nation.

I concluded that the cultural uniqueness of the beomurim-type kimchi was based on jeupjeo, and that the jeupjeo-type beomurim kimchi recipe might have been developed in the Goryeo period at earliest by systematically verifying the probability that radish kimchi from the poem of Gyu-Bo Lee, which is the oldest record about kimchi in existence, is jeupjeo. I can assume that kimchi has existed since the three nations' period or earlier, as the above assumption is based on the oldest reference in existence.

We can see that the sobagi-type jang kimchi, which was developed from jeupjeo but made using cooked vegetables, was classified as kimchi by the early 19th century and then has been classified as specialty foods like sukjangajji and seon(膳) since the late 19th century. This process indicates that Koreans recognize kimchi as fermented foods made by mixing fresh vegetables with seasonings, of which solid ingredients and soup are both edible.

This study is a very progressive attempt as I made all the above assumptions based on limited references and in limited contexts. I hope that more studies will be made to verify the unique origin of kimchi, putting an end to the controversy over Korea as the nation of kimchi.

I Glossary I

baechu tong kimchi: whole cabbage kimchi
beomurim: mixing
chaesseolgi : cutting ingredients into thin strips
chimchae: preserved vegetables
chimchaewon: the material used to preserve other ingredients (salt, vinegar, ganjang, etc.)
chimji: 沈漬, soaking
chojang: 醋醬, the sauce made of vinegar
chosanjeongjang: 醋酸貯藏, preserving ingredients using acetic acid
daedujang: 大豆醬, doenjang made of beans (dujang(豆醬) = doenjang)
dak kimchi: 鷄鹹菹, kimchi or jjanji made of chicken
damjeo: 淡菹, lightly flavored kimchi with a large amount of soup
doenjang: jang made of beans
dongchimi: mulkimchi made by salting radish and pouring soup
dujang: 豆醬, doenjang made of beans (daedujang(大豆醬) = doenjang)
eoyuk kimchi: 魚肉김치, kimchi made of fish and meat
eumyong: 飲用, solid ingredients and soup
gamdongjeo: kimchi made of mysida
ganjang: soy sauce
geonji: solid ingredients
ggwong kimchi: 生雉鹹菹, kimchi made of pheasants
gimjang: making a large amount of kimchi for winter
gochujang: : red hot chilli paste
gukmul kimchi: kimchi with soup
hajeol(夏節) jeupjeo: jeupjeo widely used in summer
hamjeo: 鹹菹, kimchi with a small amount of soup
hwanghwachae: a day lily, Hemerocallis fulva
jang: 醬, soy bean paste
jangajji: picked vegetables without soup
janguk: soup flavored with ganjang or jang
janggwa: 醬瓜, picked cucumbers
jjanji : 찐지, kimchi made by salting radish
jeo: 菹, the term from 『Shijing(詩經)』 of China referring to ancient pickled vegetables.
Used to call kimchi of the Joseon period
jeochae: jeo(菹)
jeochaeryu: pickled vegetables
jeotsanbalhyo: 乳酸醱酵, preservation using lactic acid
jeupjang: 汁菹, soybean paste made of eggplant, cucumber and other vegetables
meju: a lump of boiled and fermented soybean, an ingredient of doenjang
mujjanji: 무찐지, picked radish in salt or jang
mul kimchi: 물김치, dongchimi or nabak kimchi made to eat soup
nabak kimchi: mulkimchi made by square, thin slices of radish
onggi: 甕器, earthenware made by applying enamel and baking at a temperature lower than porcelain
sangat: 산갓, a kind of mustard
seokbakji: 석박지, kimchi made by mixed ingredients including cabbage, radish and seafood
seon: 선, 膳, side dishes made by boiling or boiling down ingredients over low heat
so: 餡, fillings
sobagi: stuffed kimchi
sokbagi: stuffing
sukchae: 熟菜, cooked or sun-dried and preserved vegetables
suk-: cooked
yujang: 油醬, the sauce made of vegetables like sesame oil or perilla oil

The Issue of Vegetable Classification and the Development of various types of kimchi

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1. Introduction: Natural studies and ecology of food

The development of food is inevitably influenced by the surrounding natural environment. Kim Ho-jik(?~1959)¹ acknowledged as the leading figure that established the modern academic perspective of ecology on nutrition wrote in the introduction of his 『Joseonsingmulgaeron』 (Introduction to Vegetation of Joseon) that, “I have come to realize that the issue of what men eat is not merely a matter of nutrition² but one that concerns biological and ecological issues in general,” and attempted to establish a modern theory on botany by focusing on the relationship between the three factors of “weather, crop and food.”³

As part of the effort, he named chapter 4 as “New challenge to botany” and sub-chapter 4-1 as “Joseon’s topography and weather” to discuss food and crops according to the topography and weather characteristics of the Korean Peninsular from an ecological perspective while he also analyzed the eating habit and preference of the people of Joseon. Joseonsingmulgaeron thus shows that developing a perspective of ecology of food⁴ according to the natural environment is an important factor in studying food.

1_ Although the author’s name is printed as 豊山泰次 on the cover of Joseonsingmulgaeron(April 25, 1945. Seoul: Published by Saenghwalgwahaksa), his Korean name 金浩植(Kim Ho-jik) is also printed in parallel on the title page. According to page 361 of Seong-wu Lee’s 『Hanguksikgyeongdaejeon』 (Hyangmunsa, 1981), Kim was born in Pyeongbuk Province, graduated from the department of biology of Tohoku Imperial University, served as a professor of home economics at Sookmyung Women’s University before obtaining a doctoral degree in nutritional science at Cornell University after Korea’s liberation from Japan and served as the Vice Minister of Culture and Education and the dean of the College of Animal Sciences at Konkuk University.

2_ The term “nutritional science” is not written in Korean style(營養學) but in Japanese jargon.(榮養學) p 7, 1945, 『Joseonsingmulgaeron』.

3_ The importance of weather and topography in food science is also stressed in the foreword written by the then dean of Sookmyung Women’s University inserted with the book’s publication. It says, “It seems natural that food is not only influenced by the nature and spirit of men but also restricted by the surrounding weather and climate.”(p 1)

4_ Il-gwon Kim’s 『Encyclopedia on food and ecology of food in Joseon』 (『An academic understanding of kimchi and gimjang culture』, World Institute of Kimchi, 2013) discusses the traditional theory on vegetation from the perspective of ecology of food and natural climatology.

As such, the perspective of ecology of food or ecology of nutrition is a very noteworthy subject when trying to reveal the cultural historical characteristics of our food. Above all, the fact that the development of Korea's food culture, which evolved by adapting to the ecological topography of the land mostly consisted of fields and mountains, is tantamount to the development of vegetable menus must be newly highlighted. People in recent days are also taking note of vegetable dishes that we usually refer to as namul(vegetable side dishes) as they strive to maintain healthy lives by reducing meat intake. The issue is also an important issue from the perspective of the world's food history as few nations have developed such a wide variety of dishes prepared with vegetables.⁵

Korea's fermented and stored food represented by kimchi is mostly prepared with vegetables including cabbage. Here, the food ingredients that we developed from the perspective of ecology of food is not merely limited to vegetables and are expanded to various types of plants found in Korea's natural ecosystem including those derived from trees such as tree roots and leaves as well as fungi such as mushrooms.

As part of an effort to contemplate on such a trend in food history, the paper discusses how the vegetable dishes are consisted of and the scope of plants they expand to. In the course, the author shall review how the term naryu, a term that refers to vegetables which is still unfamiliar to us, is widely used while delving into the classification of vegetables in traditional botany. This is also directly related to reinterpreting food and plants in the historical context.



5_ JH Kim, 『Study on vegetable side dishes of 19th century Joseon』, 1st semester report of folklore study, the Academy of Korean Studies. 2014.

2. Classification of vegetables(nachaeryu) and contemplation on the category of namul

The issue of whether tomato is a vegetable or a fruit is still confusing to the most of us while determining whether squash and cucumber should be classified as vegetable or fruit is more difficult than one would expect. cookbooks written long ago have also introduced different classification systems with these issues in mind. Then, it must be reviewed from which perspective classifications were made in traditional botany.⁶

Thus, this paper shall briefly introduce how vegetables were called in texts on medicinal herbs and agriculture and encyclopedias published during the Joseon Dynasty and the details of classification.



6_ The author has discussed how vegetables were classified in traditional botany in 「Encyclopedia on food and ecology of food in Joseon」 (2013) and the paper is a more specific study on the topic.

Table 1. List of fruits and vegetables introduced in 『Hyangyakjipseongbang(1433)』

	Category	Item	Sum	
1	Fruit, high-grade	Lotus seed(藕實), tangerine/citron(橘・柚), jujube(大棗), chestnut(栗), grape, fruit of thorn lotus(雞頭實), strawberry(Rubus matsumuranus(葡萄))(蓬萊), wild berry(覆盆子), Korean-type cherry(櫻桃), Trapa japonica Flerow (芡實)	11	28
2	Fruit, medium-grade	Japanese apricot(梅實), quince(木瓜實), persimmon(柿), taro(芋), Eleocharis Kuroguwai Ohwi(烏芋), tangerine(Citrus chachiensis Hort. Fruit) (乳柑子)	6	
3	Fruit, low-grade	Peach seed(桃核仁), apricot seed(杏核仁), pomegranate(安石榴), pear(梨), plum seed(李核仁), Korean apple(林檎), walnut(胡桃), Siberian gooseberry (獼猴桃), pine nut(海松子), cherry(奈), hazelnut(榛子)	11	
4	Vegetable, high-grade	Curled mallow seed(冬葵子), turnip/white radish(蕪菁及蘆菔), stalk end of oriental melon(瓜蒂), benincasa hispida cogniaux/benincasa hispida cogniaux seed(白冬瓜・白瓜子), amaranth(莧實), coriander(胡荽), mustard(芥), raphanus sativus L. root(萊菔根), perilla seed(荳蔻), hibiscus manihot flower(黃蜀葵花), hollyhock(蜀葵), oriental melon(甜瓜), cucumber leaf(胡瓜葉), Indian mustard(白芥), toothed ixeris(daisy)(苦苣), shepherd's purse(薺), bracken(蕨)	18	41
5	Vegetable, medium-grade	Polygonum hydropiper fruit(蓼實), Allium fistulosum L. fruit(葱實), chives(韭), rakkyo(薺), Schizonepeta tenuifolia var. japonica(假蘇), myoga(白薺荷), Perilla frutescens var. acuta(紫蘇), Plectranthus japonicus(水蘇), Elsholtzia ciliata(香薷), Mentha arvensis var. piperascens(薄荷)	10	
6	Vegetable, low-grade	Lagenaria siceraria var. gourda(苦瓠), Portulaca oleracea L. (馬齒莧), garlic(葫), while garlic(蒜), purple onion(胡葱), Brasenia schreberi(蓴), water parsley(水蘩), eggplant(茄子), Asiatic dayflower(紫萼), water chickweed(雞腸草), Radde's lettuce(白苣), Houlttuynia cordata(蕺), swede(蕪菁)	13	

First, 『*Hyangyakjipseongbang*』 (Collection of Native Prescriptions) (1433) written in the early 15th century during the reign of King Sejong lists a wide variety of medicinal herbs, representing how vegetables were classified before the invasions of Japan and Manchu in the late Joseon period. In its 『*Hyangyakboncho*』 (Native herbs) section (Volumes 76 to 85), vegetables are categorized as chaebu in which curled mallow, turnip, white radish, cucumber, white gourd-melon and oriental melon are mentioned as the gourd family and toothed ixeris (daisy), shepherd's purse and scallion are listed as chaeryu. In addition, *Codonopsis lanceolata*, oriental melon, ginger and balloon flower are categorized as grass while taro, water chestnut, lotus root and thorn lotus are listed as fruit.⁷ Table 1 shows the significant difference in vegetable (chaemul)⁸ classification compared to late Joseon period. That is, watermelon has yet been included in the list while *Codonopsis lanceolata*; oriental melon and ginger are categorized as chobu (grass) rather than chaebu, taro is classified as gwasillyu (fruit), not part of the gourd family; and lotus root and thorn lotus are also listed as gwasillyu (fruit). Quite a number of these classification is noteworthy with perilla seed categorized as gwabu instead as gongnyu (grain) while cucumber is listed as hogwa, garlic as ho and white garlic as san.

Second, Heo Jun (1546~1615) in the mid-Joseon period wrote 『*Donguibogam*』 (Medical Book, 1610) by following the classification system of 『*Hyangyakjipseongbang*』 written during the reign of King Sejong while he included more plants to total 42 types of gwabu (fruits) and 78 types of chaebu (vegetables).⁹ In addition to the increased number, he established a more organized description system and recorded local names of most plants to clarify them, which makes his work a great resource in studying how the names have changed since the early Joseon period.

Among them, Table 2 lists the comparison of the vegetables with 『*Hyangyakjipseongbang*』.

7_ The author referred to texts including *Haengnimseowonjangpan*. *Hyangyakjipseongbangjeon* (Written by Hyo-tong Yu, Jung-rye Noh and Yun-deok Park. Published by Dongyanguihaksa. 1943) and Korean translation of *Hyangyakjipseongbang* Vol. 2 (Min-gyo Shin et al., Yeongnimsa. 1989) for the Korean name of plants.

8_ As the paper is discussing vegetables, nachaeryu and gwachaeryu, the term chaemul is used to refer to vegetables in general.

Table 2. Comparison of chaebu(vegetable) list of 『*Hyangyakjipseongbang*(1433)』 and 『*Donguibogam*(1610)』

	Chaebu list
Names listed both in chaebu of 『 <i>Hyangyakjipseongbang</i> 』 and 『 <i>Donguibogam</i> 』	Curled mallow seed(冬葵子), Brassica rapa(蔓菁), raphanus sativus L. root(蘿菔), benincasa hispida cogniaux(白冬瓜), amaranth(莧實), coriander(胡荽), Indian mustard(芥菜), Indian mustard(白芥) perilla seed(荳子), hibiscus manihot flower(黃蜀葵花), Althaea rosea flower(紅蜀葵), oriental melon(甜瓜), cucumber(胡瓜), toothed ixeris(daisy)(苦苣), shepherd's purse(薺菜), bracken(蕨菜), Polygonum hydropiper fruit(蓼實), scallion(葱), chives(韭菜), rakkyo(薺菜), myoga(蘘荷), Plectranthus japonicus(紫蘇), Elsholtzia ciliata(香薷), Mentha arvensis var. piperascens(薄荷), Lagenaria siceraria var. gourda(苦瓠), Portulaca oleracea L.(馬齒莧), garlic(蒜), wild chive(大小蒜), purple onion(胡葱), Brasenia schreberi(蓴菜), water parsley(水芹), eggplant(茄子), Asiatic dayflower(繁縷), Radde's lettuce(白苣), Houttuynia cordata(蕺菜, swede(芸薹)(36 types)
Names added in chaebu of 『 <i>Donguibogam</i> 』	Ginger(生薑), taro(芋子), Kuroguwai rush(烏芋), amaranth(red)(赤莧), amaranth(purple)(紫莧), cabbage(菘菜), bamboo shoot(竹筍), watermelon(西瓜), Trichosanthes cucumeroides fruit(wild oriental melon)(野甜瓜), Cucumis melo var. conomon fruit(越瓜), sponge gourd(絲瓜), lettuce(萵苣), Ixeris dentata · stolonifera(苦苣), Codonopsis lanceolata(沙參), Adenophora remotiflorus Miquel root(薺苳), balloon flower(桔梗), wild chive(野蒜), Schizonepeta rhizome(荊芥), Oenanthe stolonifera(渣芹), Ocimum basilicum(羅勒), Solanum nigrum Linné(龍葵), Osmunda japonica(蕨菜薺), clover(苜蓿), chard(莧蓬), Diospyros kaki Thunb var. sylvestris Makino root(菠薐), Ceramium boydenii Gepp(昆布), jew's ear mushroom(木耳), Phellinus igniarius mushroom(桑耳), Auricularia auricula mushroom(槐耳), shiitake mushroom(香菇), Umbilicaria esculenta mushroom(石耳), gyunja(菌子), pine mushroom(松耳), Allium macrostemon(海菜), marine algae(海藻), kelp(海帶), sea trumpet(昆布), laver(甘苔), Artemisia selengensis(鹿角菜), Artemisia vulgaris var. vulgatissima(萵蒿), Aralia elater(木頭菜), butterbur(白菜)(42 types)
Names listed in 『 <i>Hyangyakjipseongbang</i> 』	Stalk end of oriental melon(瓜蒂), benincasa hispida cogniaux(白瓜子), raphanus sativus L. root(萊菔根), Schizonepeta tenuifolia var. japonica(假蘇), Plectranthus japonicus(水蘇), water chickweed(鷄腸草)

As seen above, chaebu of 『*Donguibogam*』 added 42 types to 『*Hyangyakjipseongbang*』 with 36 duplicate types such as curled mallow and turnip and 6 types including Schizonepeta tenuifolia var. japonica and Plectranthus japonicus not included.

A closer look at the newly added items shows that taro and slender spike rush were already included in gwabu of 『*Hyangyakjipseongbang*』 but were reclassified as chaesoryu instead of gwasillyu in 『*Donguibogam*』. Red amaranth, purple amaranth and trichosanthes cucumeroides fruit(wild oriental melon) seem to be subspecies of amaranth and oriental melon. While baechae(菰菜) and meohwi(白菜) both known to refer to cabbage are listed as separate types, spinach, lettuce, chard, bamboo shoot, aralia elater and wild chive were added as well as Oenanthe stolonifera which is a type of water parsley, Osmunda japonica which is a type of bracken, Artemisia selengensis which is a type of chrysanthemum, clover which is a type of bean and Schizonepeta rhizome which is a type of Prunella vulgaris var. lilacina.

Moreover, it is noteworthy that four types of the gourd family including watermelon, Cucumis melo var. conomon fruit, sponge gourd and Ceramium boydenii Gepp as well as ginger, Codonopsis lanceolata and balloon flower were added. Seven types of mushrooms including Auricularia auricula-judae, Auricularia auricula, shiitake mushroom, Umbilicaria esculenta mushroom, pine mushroom and gyunja(菌子) as well as six types of seaweed including Allium macrostemon, marine algae, kelp, sea trumpet, laver and Artemisia selengensis are listed as chaebu in 『*Donguibogam*』. Thus, the text serves as the basis upon which the category of chaemul widely refers to gwaryu, mushrooms and seaweeds.



9_ Although it is commonly known that 91 types of fruits, 123 types of vegetables and 267 types of grasses are listed in Donguibogam, it must be noted that this is not the total number of the types of plants but a sum which for example includes red bean, red bean leaf and red bean flower in case of red bean. In addition, existing studies on number of plants in Tangyak section reports 33 types of grains, 41 types of fruits, 72 types of vegetables, 206 types of grasses and 95 types of trees with the total of 447 types, the author's review found the sum to be 459 types which includes 25 types of grains, 42 types of fruits, 78 types of vegetables, 212 types grasses and 102 types of trees. Moreover, the author has yet to find a study that attempted to analyze the number of animals and conducted an analysis to find a total of 197 types including 54 of birds, 46 types of animals, 53 types of fish and 95 types of insects, rather than 491, which is a mere sum of the introduced items.

:Website of Heojun Museum, <http://www.heojun.seoul.kr>; Gyeong-wu Lee, Contemplation on plant classification of herbs listed in Tangaek section of Donguibogam, Master's thesis in Korea National University of Education, 2002; Gang-tae Seo, Classification of herbs listed in Tangaek section of Donguibogam. Doctoral thesis in Kyungseong University, 1997; Il-gwon Kim, Contemplation on texts related to biological classification system in the traditional times. Report of Korea Environment Institute, 2014.

Orthography is also an issue with the Chinese words that refer to radish is written as nobok in Hyangyakjipseongbang and nabok in 『Donguibogam』 and local names of chive and rakkyo listed as ‘soraе’ and ‘buchae’ in 『Hyangyakjipseongbang』 respectively while the terms are switched in 『Donguibogam』 with chive written as ‘buchae’ and rakkyo as ‘yeomgyo’. That is, chives were called as rakkyo(hae) in 『Hyangyakjipseongbang』 while it was categorized as chive in Donguibogam in line with current classification. In case of garlic, 『Hyangyakjipseongbang』 calls it ‘ho’ while 『Donguibogam』 lists it as ‘daesan(manal)’; wild chive is written as ‘san’ in 『Hyangyakjipseongbang』 as well as sosan with the local name introduced as ‘dallaei’ while in 『Donguibogam』, it is listed as ‘sosan’ with local name introduced as ‘jokji’ while yasan is called ‘dallanggoe’(Table 3).

Table 3. Comparison of names between 『Hyangyakjipseongbang』 and 『Donguibogam』

		『Hyangyakjipseongban』	『Donguibogam』
1	Radish	Nobok(蘆菔)/萊菔(Daenmu)	Nabok(蘿蔔)
2	Chive(韭)	Soraе(蘇勑)	Buchae
3	Rakkyo(薤)	Buchae(付菜)	Yeomgyu
4	Garlic	Ho(葫)	Daesan(大蒜)
5	Wild chive	San(蒜)=Sosan(小蒜) / Dallaei (月乙賴伊)	Sosan(小蒜)/Jokji; Yasan (野蒜)/Dallanggoe
6	Lettuce	白苣/Saraburo(斜羅夫老)	蒿苣/Buru
7	Toothed ixeris (daisy)	苦苣/Suihwa & Gojatbagi	苦菜/Gojatbagi; 苦苣/Suihwa
8	Taro	Fruit	Vegetable
9	Slender spike rush	Fruit	Vegetable

In case of *Ixeris dentata* · *stolonifera*(苦菜), its local name in 『*Donguibogam*』 is ‘gojatbagi(苦菜)’ while Hyangyakjipseongbang of Haengnimseowonjangpan in 1944 lists the local name of toothed ixeris(daisy) as ‘suihwa/gojatbagi’. That is, Donguibogam separately lists it as gojatbagi(苦菜) and suihwa(苦苣) whereas 『*Hyangyakjipseongbang*』 lists both with the local name of gogeo.

As such, it can be seen that significant differences exist in chaemul classification and their names between the early and mid Joseon Dynasty separated by some 170 years.

Third, 『*Saekgyeong*』 (1676), written by Bak Se-dang(1629~1703) noted as the earliest of agriculture books written from the perspective of silhak(practical learning) after the invasions of Japan and Manchu, lists the changes made in 66 years since 『*Donguibogam*』. In the introduction, it says, “This book includes various grains and fruits as well as how to better cultivate plants including vegetables in the gourd family(瓜瓞), other vegetables(蔬菜), hemp and ramie(麻枲), lumber(材木) and flower(花藥¹⁰)” and accordingly, the first volume classifies agricultural products in five categories of “grain(諸穀), vegetable(諸瓜菜), fruit(諸果), tree(諸樹) and flower(諸花藥)” and lists the agricultural method of each. The list of crops in the sub-category is introduced in the following table. (Table 4).



10_ “The duplicate information was refined and put together under the name Saekgyeong to allow easier review. In the text, various grains, fruits, the gourd family, cultivated vegetables and hemp and ramie are introduced in addition to types of chicken, pig, goose, duck, bee and fish, trees and flowers and better ways to grow mulberry trees and silkworms, which is designed to improve the livelihoods of the public in all manners.” Introduction of Saekgyeong, p 271. Rural Development Administration's Agricultural Science Library.

Table 4. List of crops introduced in the first volume of 『*Saekgyeong*』 (1676).
Words in square brackets refer to names in original text

	Category	Item	Total
1	Grain	Grain(種穀), barley/wheat(大・小麥), rice in rice paddy(水稻), rice in field(旱稻), hog millet(Other: Sorghum)(黍稷_附梁秫) sorghum(蜀黍), soybean(大豆), red bean(Other: mung bean)(小豆_附菽豆), pea(豌豆), sesame(胡麻), hemp seed(麻子), hemp(麻), ramie(苧麻) and cotton(木綿)	17
2	Vegetable	Cucumber(Other:hwanggwa)(瓜_附黃瓜), watermelon(西瓜), white gourd-melon(冬瓜), white-flowered gourd(瓠), taro(芋), curled mallow(葵), eggplant(茄子), Brassica rapa(蔓菁), Raphanus sativus(蘿蔔), mustard(芥子), ginger(Other: gamnoja)(薑_附甘露子), garlic(蒜), scallion, chive and rakkyo(薤[韭]), lettuce(萵苣), perilla seed(Other: water pepper)(荳・蓼_附蘇子), gyunja(菌子), purple onion/sujeongpa(藟・水精蔥), safflower(紅花)jr, indigo plant(藍) and Indigo Pulverata Levis(靛)	26
3	Fruit	Pear(梨), peach(桃), plum(李), apricot(杏), apple(Other: Korean apple)(林禽_奈附), jujube(棗), chestnut(栗), hazelnut(榛), persimmon(Other: date plum)(柿_軟棗附), quince(Other: ginkgo nut)(木瓜_銀杏附) and grape(葡萄)	14
4	Tree	Bamboo tree(竹), nut pine tree(松・栢), royal foxglove tree(Other: lacquer tree)(梧桐_漆附), locust tree(槐), paper mulberry(穀楮), gardenia(梔子), Chinese matrimony vine(枸杞) and aspen(白楊)	10
5	Flower	Lotus(蓮), chrysanthemum(菊), Rehmannia(地黃), Cassia obtusifolia Linné(決明), fennel(茴香), yam(薯蕷) and reed/Typha orientalis(葦・蒲)	8

One noticeable fact is that vegetables are not categorized as chaebu like Hyangyakjipseongbang and 『*Donguibogam*』 but separately distinguished as fruit and gwachaeryu(vegetable). Here, gwaryu(fruit) including cucumber, watermelon, white gourd-melon and white-flowered gourd are listed on the top followed by chaeryu including scallion, chive and lettuce, which seems to be an attempt to distinguish gwaryu(fruits) and chaeryu(vegetable). Moreover, mushrooms, perilla seeds and safflower are included in the category, making chaeryu a term with wider meaning.

In addition, Korean names are also introduced for a part of grains and gwachaeryu(fruits and vegetables) in 『*Saekgyeong*』 - when compared with 『*Donguibogam*』, lettuce is still called ‘buru(萵苣)’ while donggyu(冬葵(curled mallow) that we currently call auk(curled mallow) is introduced as ‘aok’, white gourd-melon that we currently call donga is donghwa, turnip that we currently call sunmu is swinmuu, chive is listed as ‘buchae’ and rakkyo(薤) is recorded as ‘yeomgyo’. In comparison, what is written as ‘yeotgwi(蓼實)’ in 『*Donguibogam*』 is differently called as ‘seotgwi’ in 『*Saekgyeong*』 while ‘*Raphanus sativus*(蘿蔔)’ is also slightly differently called daemuu.¹¹

In case of watermelon, 『*Saekgyeong*』 categorized it as vegetable as in the case of 『*Donguibogam*』 while Jeongjoji of Imwongyeongjeji written in the 19th century categorizes it as gwaryu(fruit), which represent the gwasillyu, a fruit category. In case of *Dioscorea batatas*, Jeongjoji lists it was fruit while it is included in the hwayangnyu(flower category, 花藥) in 『*Saekgyeong*』.



11_ SW Lee, 『Hanguksikgyeongdaejeon』, Hyangmunsa, 1981, p469.

Table 5. Lists of Chinong and Chipo in 『Sallimgyeongje(1718)』

Category	Item
Chap. 3 Chinongmun	{Agriculture(治農序)} Heomse(predicting good and bad harvest)(驗歲), gigok(praying for good harvest)(祇穀), taekjong(selection of seeds)(擇種), subun(utilization of fertilizers)(收糞), gyeongpa(seeding and plowing)(耕播), Rice farming(種稻)(early-ripening rice(早稻), intermediate rice(次早稻), late-ripening rice(晚稻), hog millet(種黍)/Italian millet(粟)/barnyard millet(稷一名稗)), sorghum(蜀黍[一名秫葛, 鄉名唐黍]), soybean(種大豆)/red bean(小豆)/mung bean(菉豆)/kidney bean(菹豆)/pea(豌豆), 種芝麻[鄉名眞荏, 或稱脂麻・白油麻, 黑者稱胡麻, 或稱巨勝]・水蘇麻[鄉名水荏, 或稱油麻] Buckwheat(種蕎麥), barley/wheat(種大・小麥), adlay(種薏苡), cotton(種木花), hemp/ramie(種麻・苧麻), safflower(種紅花), indigo seed(種藍), Indigo Pulverata Levis seed(種靛) and Typha orientalis(種茵草)
Chap. 4 Chipomun	{Farming(治圃序)} Vegetable farming(治圃). Watermelon(種西瓜), oriental melon(種甜瓜[眞瓜]), broad-leaved rice grass(種苳[或稱胡苳・黃苳]), white gourd-melon(種冬苳[一名地芝, 或稱白冬苳]), white-flowered gourd(種瓠[或稱胡蘆]) Ginger(種薑), scallion(種蔥), purple onion(種紫蔥[寶鑑曰本草胡葱疑是今之紫蔥也]), garlic(種蒜), chive(種韭), taro(種芋[或稱土芝, 鄉名土蓮]), lotus stem(種茄), water parsley(種芹), radish(種蘿菔[或稱菜菔, 亦曰蘆菔]), Brassica rapa(種蔓菁[或稱燕菁]), Indian mustard(種芥) Brassica chinensis(種菹菜), radde's lettuce(種萵苣), butterbur(種白菜), spinach(種菠菜), Coriandrum sativum(種胡荽[或稱香菜]), curled mallow(種冬葵), sesame leaf(種青蕒[即胡麻角]), Brassica juncea var. integrifolia(種艾芥), jeongno(種滴露[或稱甘露]), poppy(種罌粟殼), cockscomb(種鷄冠), Chinese pepper(種南椒[或稱倭椒]), Ligularia fischeri(種熊蔬), dongchwi(種冬蔬), clover(種苜蓿), Korean angelica(種當歸), curled dock(種羊蹄根), mushroom(生草菌法) and garden balsam(種鳳仙花[一名隱性子])

Fourth, 『Sallimgyeongje(1718)』 written by Hong Man-seon(1643~1715) is a text produced 100 years after 『Donguibogam』 and 42 years after 『Saekgyeong』 and is worth studying as it is widely quoted in various agricultural books and cookbooks of the 18th and the 19th century.

The following list is a summary of grains and vegetables introduced in 『Sallimgyeongje』.¹² In the third chapter Chinongmun(Chapter on agriculture), the author discusses rice, hog millet, Italian millet, barnyard millet, sorghum, bean and red bean while introducing agricultural techniques of grains and the fourth chapter Chipomun(Chapter on farming) explains farming, or how to cultivate various vegetables.

In Chipomun which discusses vegetables, the author introduces vegetables in the gourd family such as watermelon, oriental melon and cucumber first; bulbs and tubers vegetable such as ginger and scallion second; leaf vegetable such as cabbage, buro, spinach, Sonchus oleraceus L. and curled mallow third; vegetables with flavors such as Ligularia fischeri, dongchwi and Korean angelica fourth; mushrooms from five trees of elm, willow, mulberry, spindle tree and paper-mulberry and garden balsam whose oil is used for cooking last.

A closer look at the listed names show that the character go(藎) was replaced with gwa(瓜) by adding “cho(草, grass)” in all words to emphasize that the gourd family is a type of grass, which draws the conclusion that it would be proper to pronounce them as ‘gwa’ rather than ‘go’.¹³ 『Hyangyakjipseongbang(1433)』 says ‘cucumber(胡瓜) is the same as go(藎)’ and uses 瓜 and 藎 together while 『Hunmongjahoe(1527)』 written 100 years later also reads 藎 as ‘gwa’(Yesanmungo edition Vol 7)¹⁴. Thus, it is correct to pronounce 西

12_ Table 5 is generally based on Minchugungnyeokbon(Translated version produced by the Institute for the Translation of Korean Classics)(1982) while the author also referred to Hanguksikgyeongdaejeon(1981). The Institute’s Gungnyeoksallimgyeongje(Korean translation of Sallimgyeongje)(1982) is based on Sammongnyeonggujangbon(currently owned by Takeda Science Foundation in Japan) and was produced through comparison with Ilsanmungobon and Ohangeunjangbon of Handok Medico-Pharma Museum(referred to the explanatory note of the Institute for the Translation of Korean Classics). However, information contained in Sikgyeongdaejeon is based on manuscript of Yeungnam University and Jeungjeonghyeontobon(Translated by Gyeong-jon Yu, 1918. Hoedongseogwan. Seoul). The two versions have considerable differences in names of plants and their Korean name. The issue needs to be addressed in the future.

13_ Dictionary of Chinese Character Variants(Taiwan Ministry of Education) lists 藎 as a variant of 藎, (fragrant grass) which means the word is not related to 瓜. Thus, pronouncing 藎 as ‘gwa’ can be interpreted as Joseon style.

14_ SJ Choi, 『Hunmongjahoe』, of 『Dongyanghakchongseo』 Vol.1. Institute of Oriental Studies, 1971, p39.

菰 as seogwa, not seogo and 靛菰 as cheomgwa instead of cheomgo.¹⁵ It seems that Sallimgyeongje also wrote the Chinese character for chive as the variant gu(菰) rather than the generally-used character gu(韭) by adding ‘++’ in the same context.

Oriental melon(靛菰, 眞菰) and cucumber(菰, 胡菰, 黃菰) are both written as ‘oe’ while ‘baechae’ which is cabbage and ‘meohwi’ which is butterbur were distinguished as in the case of Donguibogam. Above all, Sallimgyeongje introduced Chinese pepper not mentioned in 『Donguibogam』¹⁶ and 『Saekgyeong』 for the first time and also calls it waecho(grass from Japan). It is also noteworthy that gomdallae, which represents gomchwi(groundsel) and dongchwi, not included before was newly introduced.

In general, 『Donguibogam』 focuses more on explaining the medicinal effect of plants as it is a medical book on herbs while 『Sallimgyeongje』 focuses on edible vegetable as the book is designed to explain agriculture and farming in daily lives. For example, Korean angelica refers to a plant whose root is famous as a medicinal herb. 『Sallimgyeongje』 does not mention its root and explains how to eat it by saying that, “yellow sprouts grow fast when sprayed with warm water in a hut during winter and the taste is also good.” In case of garden balsam, the book also introduces the edible aspect of its oil by saying that, “its seed is pressed for oil, which tastes better than sesame oil when sprayed on food.”

As such, the value of Sallimgyeongje which focuses on vegetable farming instead of medicinal herbs was recognized and resulted in various manuscripts being produced during the late Joseon period, which include condensations, omissions and reproduction without the source

15_ “Comprehensive Chinese Word Dictionary” says 菰(fragrant grass) when pronounced as ‘gū’ carries the same meaning as 菰 and is equivalent to 瓜(cucumber) when pronounced as ‘guā’. That is, 菰 must be pronounced as gwa(瓜) when the word indicates the gourd family.

16_ Based on the paper of Gwang-ho Lee, “Vegetable classification and confusion in names found in traditional agricultural books” (Vol. 111 of Eomunhak. (Language studies). Korea Institute of Language and Literature. 2011) which introduces the text ‘菰 비치송. 俗呼白菜’ in Hunmongjahoe(上7b), it was determined that calling cabbage as 白菜 is the naming that follows the Chinese language and that the types of 白菜 not related to cabbage represents butterbur.

clarified. As the name and orthography among the versions differ by time, they serve as an important resource in studying the native Korean names of plants including vegetables.

As is generally known, 『*Jeungbosallimyeongje*』 (Supplement version of 『*Sallimyeongje*』(1766) written by Ryu Jung-im(1705~1771) was written fifty years later and incorporates the differences made between the years. In the text, namgwa was newly added while the local name of wageo(lettuce) is not listed as *buro* as in 『*Donguibogam*』 and 『*Sallimyeongje*』 but as ‘싱치’ for the first time. In addition, burdock, great water rush and glutinous millet were added while the pronunciations were slightly changed for butterbur, Chinese pepper, *Ligularia fischeri*, clover, Korean angelica and curled dock. Items such as *Perilla frutescens* var. *acuta* listed in 『*Hyangyakjipseongbang*』 and 『*Donguibogam*』 but not in *Sallimyeongje* were also added. In addition, the author defined the new category of wild vegetables and listed shepherd’s purse, penny cress, amaranth, mountain Indian mustard, *Ixeris dentata* · *stolonifera*, wild chive, wild chive, *orostachys* and toothed *ixeris*(daisy).¹⁷

Fifth, whereas texts on medicinal herbs and 『*Sallimyeongje*』 mostly used the category of vegetable which includes fruits and vegetables, 『*Saekgyeong*』 written in the late 17th century uses the category name *gwachaeryu*(瓜菜類) instead of *chaeryu*, as mentioned earlier. Meanwhile, it is noteworthy that 『*Haedongnongseo*』(1799) written by Seo Ho-su(1736~1799) distinguished vegetables into the gourd family, vegetables and fruits. (Table 6).¹⁸

17_ SW Lee, *ibid*, p45.

18_ Two versions of *Haedongnongseo* exists including one in Osaka Prefectural Nakanoshima Library (4 volumes and 2 books) and another stored in Sungkyunkwan University(8 volumes and 4 books) while the latter is a supplement version which includes the texts of *Sallimyeongje*.
SW Lee, *ibid*, p45.

Table 6. Table of contents of 『*Haedongnongseo*(1799)』

Osaka version	Vol. 1	Policy on farmland(田制), Water utilization(水利)
	Vol. 2	Farming(農務), Farming tools(農器), Name of crops(穀名)
	Vol. 3	The gourd family(瓜類), Vegetables(菜類), Fruits(果類)
	Vol. 4	Trees(木類), Grasses(草類), Silkworm and mulberry(蠶桑)
Sungkyunkwan University version	Vol. 1	Farming(農務)(Name of crops(頭註穀名))
	Vol. 2	The gourd family(瓜類), Vegetables(菜類), Fruits(果類)
	Vol. 3	Trees(木類), Grasses(草類), Silkworm and mulberry(蠶桑)
	Vol. 4	Habitat determination(卜居)
	Vol. 5	Stock breeding(牧養), Other: Food preservation, cooking and processing(附治膳)
	Vol. 6	Alcohol brewing(造釀), Other: Emergency treatment(附救急)
	Vol. 7	Hog farming(辟逐), Medicinal herb(治藥)
	Vol. 8	Medicine preparation(丹藥), Selection of good or ill luck days and direction(選擇)

『*Haedongnongseo*』’s Osaka version lists vegetables as shown in Table 7 and introduces seven types of vegetables in the gourd family including cucumber, oriental melon, watermelon, white gourd-melon, squash, white-flowered gourd and eggplant first. 『*Haedongnongseo*』 seems to be the first text that clearly separated vegetables in the gourd family.¹⁹ Meanwhile, as eggplant was listed after vegetables in the gourd family and bulbs and tubers vegetables in 『*Saekgyeong*』 and 『*Sallimgyeongje*』, it is noteworthy that it was included as vegetable in the gourd family in 『*Haedongnongseo*』.²⁰



19_ Gwang-ho Lee(2011) also made the same remark.

20_ Gwang-ho Lee(2011, p94) considered the placement of eggplant in *Haedongnongseo* as a classification error.

Table 7. List of vegetables listed in 『Haedongnongseo(1799)』

Category	Item	Annotation
The gourd family	Cucumber(黃瓜), oriental melon(甜瓜), watermelon(西瓜), white gourd-melon(冬瓜), cucumber(南瓜), white-flowered gourd(瓠) and eggplant(茄)	
Vegetable	Rhaphanus sativus L. root(蘿蔔), Brassica rapa(蔓菁), cabbage(菰), mustard(芥), crown daisy(茼蒿), swede(蕪菁), ginger(薑), scallion(蔥), purple onion(紫蔥 [胡葱, 回回葱]), garlic(蒜), chive(韭), rakkyo(薤), chili(番椒), curled mallow(葵), burro(窩苣), water parsley(芹), Brasenia schreber(蓴), castor bean(蓖麻), Chinese matrimony vine(枸杞), shiitake mushroom(蘑菇), Perilla frutescens var. acuta(紫蘇), cockcomb(雞冠), Ligularia fischeri(熊蔬), Aralia elata sprout(木頭菜), Korea angelica(辛甘菜), taro(芋), Dioscorea batatas(薯蕷) and sweet potato(甘藷)	Farming technique(治圃法), Brassica chinensis(種白菜), Spinach(菠菜), Coriander(胡荽), Turnip(青蕓), Jeongno(滴露), Winter vegetable(冬蔬), Clover(苜蓿), Korean angelica(當歸), Rumex coreanus NAKAI(羊蹄), Garden balsam(鳳仙花)
Fruit	Jujube(棗), peach(桃), plum(李), plum(梅), apricot(杏), pear(梨), Malus sieboldii (Regel) Rehder(棠梨), chestnut(栗), hazelnut(榛), apple(柰), Korean apple(林檎), persimmon(柿), date plum(羣千子), Korean-type cherry(櫻桃), pomegranate(石榴), tangerine(橘), Citrus chachiensis Hort. Fruit(柑), tangerine(Citrus c hachiensis Hort. Fruit), citron(柚), ginkgo nut(銀杏), walnut(胡桃), quince(木瓜), Korean angelica(山楂), pine nut(海松子), nutmeg(檳子), acorn(橡實), cherry(樺實), Zanthoxylum ailanthoides fruit(食茱萸), Chinese pepper(蜀椒), lotus seed(蓮子) and grape(葡萄)	

The author lists cabbage followed by Rhaphanus sativus and radde's lettuce, hinting the vegetable's elevated status while crown daisy and Chinese pepper are listed before curled mallow and lettuce, indicating the first two were more common. In addition, Chinese pepper was listed as beoncho and was included instead of Chinese pepper(namcho, nammancho, waecho). castor bean, matrimony vine and Korean angelica that were not found in previous texts were added and it is also noteworthy that sweet potato was newly listed as vegetable.

Meanwhile, 『*Haedongnongseo*』 classifies perilla seed along with sesame seed as grain, which is a significant change from 『*Hyangyakjipseongbang*』, 『*Donguibogam*』, 『*Saekgyeong*』 and 『*Sallimgyeongje*』 which all categorized it as vegetable.

Sixth, whereas the category name of vegetables were chaeryu for medicinal herbs in 『*Hyangyakjipseongbang*』 and 『*Donguibogam*』 and gwachaeryu in 『*Saekgyeong*』, it can be found that Seo Ho-su in 『*Haedongnongseo*』 established a new system by separating vegetables in the gourd family and other vegetables. The classification method can be called as ‘the gourd family and other vegetables classification.’ Although 『*Sallimgyeongje*』 applied a different system and did not use the exact term, its method also falls into ‘the gourd family and other vegetables classification’ as the author distinguished the gourd family from other types of vegetable.

That being said, it is quite interesting that 『*Nongseongbonsa*(1787)』 written by Seo Myeong-eung(1716~1787) who is Seo Ho-su’s father proposes an entirely different method. Although the text was discussed in detail in Seong-wu Lee’s 『*Hanguksikgyeongdaejeon*』, it was not easily found in the studies made afterwards. Reasons include that the text is not discussing food and that no translated versions exists. However, a closer look at the text reveals that the author provides various native names of vegetables and introduces the most specific and systematic classification of vegetable among all texts produced in Joseon, which makes it worth referring to when contemplating the issue of food ingredients in traditional food studies.

『*Bonsa*』 classifies vegetables into five categories of hunchae, nachae, hwalchae, suchae and jji(Ochaesega). Following is the detail.

(1) Hunchaesega(葷菜世家): 16 species and 7 sub-species

① Chive(韭(附山韭)/富菜) ② Scallion(蔥(附山蔥)/菠) ③ Rakkyo(薤(附山薤)/髻薤) ④ Ginger(薑/生薑) ⑤ Mustard(芥(附白芥)/山芥). 其子俗名薊子 ⑥ Manchurian violet(堇) ⑦ Toothed ixeris(daisy)(茶/苦紫乙朴伊) ⑧ Garlic(蒜(附山蒜·澤蒜)/麻) ⑨ Purple onion(紫蒜/紫蔥) ⑩ *Artemisia vulgaris* var. *vulgatissima*(同蒿(附邪蒿)) ⑪ Swede(芸薹/苳芝) ⑫ Coriander(胡荽/苦紫) ⑬ *Lithospermum* root(紫堇/赤芹, 蜀菜, 起貧草) ⑭ *Ocimum basilicum*(羅勒/蘭香), 香菜, 賢子草 ⑮ *Rorippa indica*(蔊菜) 16. Chinese pepper(苦椒/倭苦草)

(2) Nachaesega(蓴菜世家): 20 species and 1 sub-species

① Cucumber(黃瓜/莛) ② White gourd-melon(冬瓜/冬華) ③ Sponge gourd(絲瓜/垂絲莛) ④ *Cucumis melo* var. *conomon* fruit(越瓜) ⑤ squash(南瓜) ⑥ Bitter gourd(苦瓜) ⑦ squash(甘瓠/扈珀), also known as (南瓜) ⑧ White-flowered gourd(苦瓠/珀) ⑨ *Lagenaria siceraria*(Molina) Standl.(壺盧(雕籠珀)) ⑩ *Raphanus sativus*(萊菔/大蕪芋) ⑪ Turnip(蕪菁/酥蕪芋) ⑫ Eggplant(茄子/茄芝) ⑬ Taro(芋子/土蓮). 嫩芽, also known as (右隱臺) ⑭ Taro(野芋(附土芋)/土卵, 黃獨, 土豆) ⑮ Sweet potato(甘藷) 16. Hemp(薯蕷/蔴) 17. Bamboo shoot(竹筍, 竹芽), 竹胎, 竹子 18. *Codonopsis lanceolata*(沙參/加德) 19. Balloon flower(桔梗/莢莢叱) 20. *Adenophora remotiflorus* Miquel root(薺苳/薺蘆根)

(3) Hwalchaesega(滑菜世家): 28 species and 27 sub-species

① Cabbage(菰/培菜) ② *Hibiscus manihot* flower(葵(附蜀葵·黃蜀葵)/葵莢沃)一日花 ③ Bracken(蕨(附水蕨)/高沙苞) ④ *Osmunda japonica*(薇/苗初味) ⑤ Water spinach(薺) ⑥ *Amaranth*(莧(附馬齒莧)/非蘆音_衰非蘆音) ⑦ Shepherd's purse(薺/나이(羅伊)) ⑧ *Stachys sieboldii*(大薺/大羅伊) ⑨ Clover(苜蓿/芸茹苜) ⑩ Myoga(薺荷) ⑪ chard(薺蓬/芹大) ⑫ Spinach(菠薐/薺芹菜) ⑬ Sea mustard(鹿藿) ⑭ Chinese milk vetch(翹翹) ⑮ Curled mallow(蔞葵) 16. Toothed ixeris(daisy)(白苳/苦苳)_柴花 17. Buro(蒿苳/阜蘆) 18. *Stellaria media*(繁蘊(艸縷)) 19. Korean angelica(辛甘菜/升淹菜) 20. Rough aster(東風菜) *Aralia elater*(木頭菜(附水苦賣)/斗乙滷) Toothed ixeris(daisy)(黃瓜菜(附生瓜菜) Red goose-foot(灰滷菜(附菜)) Cactus(仙人掌) Dandelion(蒲公英/安孺芳飴) Asiatic dayflower(鷄腸草/鷄十可飛) *Houttuynia cordata*(魚腥草/蕺菜) *Potentilla discolor*(繡白草)

(4) Suchaesega(水菜世家): 12 species and 3 sub-species

① Water parsley(芹/(艸糜)蘿芎) ② Brasenia schreberi(蓴/笋) ③ Artemisia vulgaris var. vulgatissima(萋蒿(附睡菜)/水蒿) ④ Kuroguwai rush(烏芋(附慈姑)/兀莓) ⑤ Allium macrostemon(海菜/無魚肉), 甘藷 ⑥ Sea tangle(海帶(附昆布)/多士麻) ⑦ Laver(紫菜/++朕), (海衣) ⑧ Nemacystus decipiens(海蘊/甘苔) ⑨ Marine algae(海藻/馬乙) ⑩ Gloiopeltis furcata(鹿角菜) ⑪ Asparagus schoberioides(龍鬚菜) ⑫ Worwangyeoju(越王餘籌)

(5) jiisega(芝栢世家): 15 species

① Jicho(芝/芝草) ② Pine mushroom(松茸/松耳) ③ Pungsim(楓茸) ④ Jew's ear mushroom(木耳/杉槲槐榆柳耳) ⑤ Jii(地耳) ⑥ Umbilicaria esculenta mushroom(石耳) ⑦ Green laver(石蓴) ⑧ Bamboo(竹蓴) ⑨ Togyun(土菌) ⑩ Gwangyun(藟菌) ⑪ Gallyu(葛乳) ⑫ Gyejong(鷄蹤) ⑬ Tachae(鮑菜) ⑭ Cheonhwachae(天花菜) ⑮ Magosim(磨菰茸)

As seen above, vegetables are categorized in five groups of hunchae, nachae, hwalchae, suchae and jii. The value of the text is further highlighted as the author explains the reason behind the classification for each group. In 『*Bonsa*』(12 volumes and 6 books) included in volumes 23 to 34 of Bomanjaechongseo, the author's collection of literary works, Seo under the belief that "Agriculture forms the basis of national existence"(mentioned in the introduction) lists all matters related to agriculture and introduces various grasses and trees by following the format of gijeonche, which represent the format of presenting history in a series of biographies. Thus, the author defined the criteria for classifying each vegetable group while commenting on the characteristics of each plant by adding "太史公曰(Taishigong says)²¹" at the end of each category by following the format of a historical book.

『*Bonsa*』is an interesting and valuable material as it virtually seems to be the only work organized with such clear criteria and perspective among those produced during the Joseon Dynasty.

Seo listed 23 types of bitter vegetables in hunchae and says, “Hun refers to vegetable with bitter taste.” Here, Seo stresses that five types of hunchae are the most important in this group and makes the following comment from the perspective of the three religions of Taoism, Buddhism and Confucianism.

“Taoism defines chive, white garlic, swede, coriander and rakkyo as five hunchae, Buddhism considers garlic, wild chive, Chinese squill, purple garlic, *Allium victorialis* var. *platyphyllum*(wild garlic) as five hunchae and Confucianism considers scallion, garlic, chive, rakkyo and mustard as five hunchae.”

In other words, the three religions of Taoism, Buddhism and Confucianism differently defines five hunchae while they commonly consider vegetables with strong flavor such as garlic, wild chive, chive and rakkyo as those to refrain from. As such, the author introduces his opinion that the three religions developed the concept of five hunchae. He also explains that the three religions take different approaches to five hunchae.

“While Taoism and Buddhism considers the bitter taste as not pure and considers them taboo, Confucianism does not refrain from them except for purification rituals and recommends their intake as they cure sickness and help avoid ill omen.”

Taoism and Buddhism considers five hunchae as taboo as these religions emphasize body cultivation while Confucianism thought highly of them except for purification for rituals, thinking that they cure sickness and help avoid ill omen. The author explains that one must ask the elderly whether he wants night snacks prepared with hunchae because hunchae helps cure sickness(Yili(Book on etiquette and ceremony)), Shi xiangjian li(Rites attendant on the meeting of common officers with each other), people gave out hunchae bundled in red straps

at the height of summer during the Han Dynasty and the Tang Dynasty and five bitter dishes were served in royal palaces on New Year's Day and onset of spring because hunchae helps avoid ill omen. At the end, the author writes, "Although hunchae is consisted of approximately 16 types, the three religions of Taoism, Buddhism and Confucianism have defined the five bitter vegetables differently. All of them are introduced here under the category of hunchae."

Next, while nachae(萵菜) generally refers to vegetables in the gourd family including cucumber and gourd, it is quite interesting that Seo uses the term nachae instead of gwachae.

Here, the character Na(萵) comes from Rites of Zhou which says, "Fruits and vegetables(gwara) in the fields are collected and provided for rituals." That is, fruits and vegetables grown in the wild are collectively referred to as gwara(果萵).

This phrase from Rites of Zhou and the interpretation of gwara(果萵) in books including I Ching and Book of Han, Zheng Xuan(127~200)²², a great scholar of the Later Han period, said, "Gwa(果) is a group of peaches and plums while na(萵) is a group of cucumbers and small cucumbers." Xu Shen(58~147) of the Later Han period in his dictionary Shuowen Jiezi(Explaining and Analyzing Characters) said, "Gwa(果) grows on tree, na(萵) grows with grasses."²³ Fengsu tongyi(Comprehensive meaning of customs) written by Ying Shao(153~196) in the Later Han period commented that, "Fruits of trees are called gwa(果) and those from grasses are called na(萵)." Zhang Yan, a scholar of the Han and Wei Dynasties, explained that. "Those with

21_ The term "Taishigong" was used by the great historian Sima Qian who lived during the reign of Emperor Wu of Han to add his comments while compiling his Records of the Great Historian. Seo followed this method in classifying plants into groups and adding his opinion. Thus, Taishigong here refers to Seo himself.

22_ In the text I Ching, it is written that, "Gengua represents gwara(果萵)." It is introduced in the Book of Han that, "As the South of the Yangzi River has plenty of land, gwara and shellfish are produced in bountiful for people to enjoy in their daily lives."

23_ Quoted Shuowen Jiezi(Explaining and Analyzing Characters) introduced in Jia Sixie's Qimin Yaoshu(Important Arts for the People's Welfare). Translated by Miao Qiyu and Miao Kuei-lung. Translation of Qimin Yaoshu, Shanghai Classic Publishing House, 2009, p74.

seeds are gwa(果) while those without are na(蒴).” Yan Shigu(581~645), a Confucian classics researcher during the Tang Dynasty interpreted by saying that, “Those growing on trees are gwa(果) while those found on land are na(蒴).” The variety of interpretations indicate the difficulties in classification and in summary, the fruits from grasses and trees are divided into gwa(果) and na(蒴). (Table 8).

Table 8. Interpretation of Gwara(gwa and na, 果蒴)

	Gwa (果)	Na (蒴)
Xu Shenu	Grows on trees	Grows on land(grass)
Zheng Xuan	Group of peaches and plums	Groups of cucumbers and small cucumbers
Ying Shao	Fruits of trees	Fruits of land(grass)
Zhang Yan	Those with seeds	Those without seeds
Yan Shigu	Grows on trees	Found on land

In the introduction of Nachaesega, Seo Myeong-eung says, their “wisdom to determine gwara(gwa and na)” cannot be compared to their descendents and explains the difference by saying, “All edible vegetables that bear fruit are called na(蒴)²⁴ and as they are divided when it comes to cucumber, the three groups of cucumber, na(蒴) and gwa(果) belong to one category but differ in types.” Seo explains that fruits are circular because it bears the spirit of gold, while na(蒴) are mostly oval because its nature of grass is slightly stronger than the spirit of trees. This comes from a detailed observation of the shapes of gwa and na.

24_ At the end of Nachaesega, Seo explains the Chinese character na(蒴) by adding “Taishigong says” that, the four vegetables in the gourd family including sponge gourd, Cucumis melo var. conomon fruit, squash and Momordica charantia L. fruit have all been imported to China and only five types including cucumber, benincasa hispida cogniaux, Thladiantha dubia Bunge fruit, Lagenaria leucantha and white-flowered gourd existed during the Three Dynasties of antiquity. As the first three are gwa(瓜) and the last two are ho(瓠), Seo interpreted that na(蒴) is a character consisted of cho(艸) and two gwa(瓜). The author wishes to share the text as it is quite an interesting interpretation.

From the text, it can be summarized that fruits with circular shape and *nasil* with oval shape refer to fruits of woody plants and herbal plants, *gwa*(瓜) is limited mostly to those that bear fruit on the ground such as creepers and *na*(蓏) is a concept that encompass vegetable in the gourd family as well as the general category of herbal plants.²⁵ Thus, Seo is proposing the perspective of *nachaeryu*(蓏菜類) which has a broader meaning than *gwachaeryu*(瓜菜類).

A closer look at *Nachaesega* introduced in *Bonsa* reveals that the author listed vegetables in the gourd family such as cucumber, white gourd-melon, apple, *Cucumis melo* var. *conomon* fruit, *namgwa*, squash and white-flowered gourd first, *nasillyu* with oval shapes such as *Rhaphanus sativus*, *radde's* lettuce and eggplant next, followed by root vegetables such as *toryeon*, taro, sweet potato, yam, bamboo sprout, *Codonopsis lanceolata*, *dorajil* and *Adenophora remotiflora*. As the above species cannot be combined as vegetable in the gourd family but required the term *naryu*(蓏類), Seo used the category name *nachae*(蓏菜). Considering that vegetable is mostly considered as leaf vegetables grown in fields that are usually referred to as *puseonggwi* and *namsae*, reviving the term *nachaeryu* and using it as a word that widely encompasses vegetables in the gourd family and root vegetables in modern days is well worth considering.

Seventh, considering that they are grown and collected in the wild, it can be induced that the term *namul* expanded to encompass general edible vegetables in the broad sense. The matter also suggests the possibility that the root of the Korean word *namul* stemming from *naryu*. As *Hunmongjahoe* which records the Korean native pronunciation of the early Joseon period reads *chae* and so as *chae*(*namul*) and *so*(*namul*) respectively, proving the possibility will require a study of texts produced before Goryeo Dynasty and is likely remain as a difficult hypothesis to elucidate.



25_ IG Kim, 「Biological classification system of the traditional times and study of related texts」
Report of Korea Environment Institute, 2014.

Upon closer look at the traditional taxonomy of plants, it can be found that Ben Cao Gang Mu(Compendium of Material Medica) written by Li Shizhen(1518~1593) defines chae(菜) as “those grown on land and trees that are edible²⁶” and that Erya(Approaching the Correct) written by Guo Pu(276~324) of Western Jin Dynasty introduces so(蔬) as the term that encompasses “all type of chae(菜) or those edible from grasses and vegetables.”²⁷ In summary, chae(菜) and so(蔬) are the terms that refer to all edible plants grown on grass and trees.

As for the Korean name, 『Hunmongjahoe』(1527, 22nd year reign of King Jungjong) written by Choe Se-jin(1468~1542) in early 16th century²⁸ explains that, chae(菜) is “나물 채. 草木可食者, 皆曰菜.” and so(蔬) is “나물 소. 百菜總名.”. The Korean word namul represents chae(菜) and so(蔬) and its meaning as explained by Guo Pu and Li Shizhen as ‘edible among those grown on grass and trees.’ Thus, namul is defined as a term with a very broad meaning and represents the entire species grown on grass and trees that are edible. The classification is similar to the scope which nachaeryu encompasses.

The problem is that namul in modern grammar is mostly used to indicate vegetables in the wild, namsae and puseonggwı are the Korean name for vegetables and that kelp or mushrooms are not categorized as the modern term for vegetables. Considering that the meaning of a word evolves through the times, it is unclear whether the relationship between naryu and namul can be found in the ancient Korean language of the Three Kingdoms or Goryeo Dynasty.

Next, hwalchae indicates vegetables with smooth surface, which is considered to have gained the soft texture by belonging to the tree group among the five categories. The category includes most items of 28 including cabbage and curled mallow as well as wild vegetables such as bracken, amaranth and shepherd’s purse.



26_ Ben Cao Gang Mu(Compendium of Material Medica) Vol. 26. Vegetable(1)

“李時珍曰, 凡草木之可茹者謂之菜. 韭薤葵蔥薑, 五菜也.”

27_ Translation of Qimin Yaoshu(Important Arts for the People’s Welfare). Vol 1. Chapter 3.

種穀의 郭璞注. “蔬, 菜總名也. 凡草・菜可食, 通名曰蔬.”; 賈思勰 按. “生曰菜, 熟曰茹, 猶生曰草, 死曰蘆.” p74.

28_ As the oldest existing print of the first edition, it was taken to Japan during the Japanese Invasion and is stored in Enryaku-ji Temple in Mt. Hiei, Kyoto. This is the Vol 2 of Hunmongjahoe’s Yesanmungo edition. Published by Academy of Asian Studies, Dankook University Press. 1971.

The next group of suchae refers to vegetables grown under water and includes vegetables grown on the waterside or under shallow water, which does not have stems, leaves, flower and fruit like those grown on land. Included are vegetables grown in fresh water such as rice paddy and pond including water parsley, selenge wormwood and Slender spike rush and those grown in seawater such as sea mustard, kelp, laver and other marine algae.

Last, jii represents mushrooms and was interpreted as vegetable that have received the vitality of land. The author explains that, “i(栢) grows on tress, i(栢) grows in humid places, yeon(莢) grows in summer, gyun(菌) grows on land and those close to ji(芝) with strong gyun(菌) are called sim(蓴),” by listing the five types grown in trees, grown in humid land, grown in summer, grown on soil and grown with strong vitality.

So far, the five vegetable groups defined in 『Bonsa』 were analyzed. As for the reason behind defining the vegetables in five groups, Seo Myeong-eung explains that there were no such mentioning in other classic texts “except for Lingshu Jing(Divine Pivot) which says curled mallow(kui, 葵) is sweet, chive(jiu, 韭) is sour, bean leaf(huo, 藿) is salty, rakkyo(xie, 薤) is bitter and scallion(cong, 蔥) is spicy and that the five groups were distinguished based on the five tastes,” citing the five tastes as the reason behind his classification of five vegetable groups. However, the author also says that classification using the five tastes alone is not appropriate and that his classification of hunchae, nachae, hwalchae, suchae and jii is one that reflects the vegetables’ nature and grouping.²⁹ Interestingly, Seo regarded the five vegetables to have corresponding five natures and explained that hunchae, nachae, hwalchae, suchae and jii have the elements of fire, metal, tree, water and soil respectively. The interpretation shows how universal Wu Xing(Five Elements) was in the perception of the traditional times.



29_ However, Seo’s classification of five vegetable groups was not introduced for the first time in 『Bonsa』.

Li Shizhen(1518~1593) of the Ming Dynasty in his Ben Cao Gang Mu(Compendium of Material Medica) took a similar approach of distinguishing vegetables into; (1) 32 types of hunchae, (2) 41 types of those with smooth surfaces, (3) 11 types of nachae, (4) 6 types of suchae and (5) 15 types of jii. The matter of comparing the two classification method must be discussed in another study due to their complicated nature. Compiled by Wang Yujie. Buo Cao Gang Mu Volumes 1, 2 and 3.

Jinling version, 2nd edition. Beijing: People’s Health Publishing House. 2004.

3. Classification of dishes prepared with grains, vegetables and fruits(gokgwanachae) in traditional cookbooks and the development of various types of kimchi

(1) So far, the paper reviewed how vegetables were categorized as chaeryu, gwachaeryu, nachaeryu or ochaeryu. The classification of fruits and grains must also be reviewed in order to consider all edible plants listed in Sallimseo³⁰ and cookbooks of the traditional time and the gist of the review can be summarized as the four groups of gokgwanachae or gokchaenagwa.

The reason for separately defining the concept naryu which represents all those grown on land and trees is due to the confusion found in traditional agricultural books where white gourd-melon, cucumber, eggplant, oriental melon and watermelon are sometimes categorized as vegetables and other times as fruits. As Seo Myeong-eung proposed after much contemplation on the issue of naryu, it seems more appropriate to use the term naryu to encompass vegetables in the gourd family³¹ such as white gourd-melon, cucumber and eggplant, gourds such as white-flowered gourd and *Lagenaria siceraria*(Molina) Standl. and bulbs and tubers such as white radish, taro and sweet potato; apply the term nachaeryu when these are combined together with chaeryu; and categorize them as nagwaryu when oriental melon and watermelon are considered as fruits together with apple and peach, in order to capture the characteristics of the crops. When wild vegetables found in the



30_ As Sallimyeongje and Imwongyeongjeji not only discuss farming but encompass broad topics including knowledge used in daily lives and food consumption, the author believes that the texts can be called 'Sallimseo' or 'Imwonseo'. In particular, Sallimyeongje was a frequently quoted and utilized text whose manuscripts were produced in various versions including Jeungbosallimyeongje (Supplement version of Sallimyeongje), Sallimyeongjeboyu and Sallimyeongjecho during the 300 years of the late Joseon period and served as a useful text as late as the early 20th century. Thus, it may be worthwhile to take note of the significance by adding an independent genre of Sallimseo.

31_ As gwa(瓜) and gwa(果) have the same Korean pronunciation, using na(나) instead is more clarifying.

fields and mountains are also included, it is difficult to combine them as chaesoryu, which indicates field crops that are artificially cultivated. From that perspective, the concept nachaeryu can be used to broaden the scope of edible plants.

In summary, grains(gok) are the best staple development by men which can be granulated, fruits(gwa) indicates fruits of woody plants, namul(na) represents those grown on grass and chaemul(chae) encompasses leaf vegetables grown in farmlands and in the wild. Thus, gokgwanachae which includes them all can be used to refer to all edible natural plants that were discovered by men for consumption.

(2) The classification in 『*Imwongyeongjeji*』(Vol. 113 Book 52, 1827), acknowledged as the summation of Joseon's agricultural books, reveals such intent to distinguish gok, gwa, na and chae. Following is a closer look at the three chapters of 『*Bolliji*』, 『*Gwanhyuji*』 and 『*Manhakji*』 that discuss names of food. The chapters introduce gok, chae, na, followed by gwa.

The first chapter Bolliji of the sixteen chapters of 『*Imwongyeongjeji*』 delves into crop farming and various grains including rice, barley and sesame. The next chapter Gwanhyuji explains vegetable farming and is consisted of the following three sections of vegetables(蔬類)(Section 1), those grown on land and trees (蓴類)(Section 2) and medicinal herbs(藥類)(Section 3).³²

Vol. 2 Vegetables(蔬類): Curled mallow(葵), scallion(葱), purple onion(紫葱), chive(韭), rakkyo(薤), garlic(蒜(附澤蒜)), ginger(薑), mustard(芥), gaeram(芥藍), turnip(蕪菁), white radish/carrot(菜菔(附胡蘿蔔)), cabbage(菘), crown daisy(茼蒿), swede(雲薑), spinach(菠薐), water spinach(蕹菜), chard(恭菜), lettuce(萵苣), clover(苜蓿), amaranth(莧), chili(番椒), myoga(薤荷), coriander(胡荽), Caryopteris



32_ Referred to the translation of Pyeong-gu Noh and Yeong Kim, 『*Imwongyeongjeji*』 Gwanhyuji(1:2) (Rice, Life and Civilization Research Center, Chonbuk University. Published by Sowadang, 2010).

incana(蘭香), lily(百合), *Stachys japonica* Miq.(甘露子), *Perilla frutescens* var. *acuta*(紫蘇), fennel(茴香), water parsley(芹), *Brasenia schreberi*,(蓴) *Polygonum hydropiper* fruit(蓼), mushroom(菌) and *Aralia elata* sprout(木頭菜) (35 species)

Vol. 3 Naryu(蓴類): Cucumber(黃瓜), white gourd-melon(冬瓜), squash(南瓜), *Trichosanthes cucumeroides* fruit(wild oriental melon)(王瓜), sponge gourd(絲瓜), white-flowered gourd(瓠(附扁蒲)), eggplant(茄) and taro(芋) (9 species)

Vol. 4 Medicinal herbs(藥類): Ginseng(人蔘), *Polygonatum odoratum* var. *pluriflorum*(萎蕤), *Rehmannia root*(地黃), Korean angelica(當歸), balloon flower(桔梗), *Adenophora remotiflora* Miquel root(薺苳), *Atractylodes ovata*(Thunb.) DC.(朮), *Achyranthes japonica* Nakai(牛膝), *Asparagus cochinchinensis* Merrill(天門冬), Broadleaf Liriope(麥門冬), *Cassia obtusifolia* Linné(決明), *Codonopsis lanceolata*(沙蔘), *Cnidium officinale*(芎藭), *Schizonepeta rhizome*(荊芥), peppermint(薄荷), *Saposhnikovia Radix*(防風), burdock(牛蒡) and great plantain(車前) (19 species)

It is noteworthy that cucumber, white gourd-melon, squash, *Trichosanthes cucumeroides*, sponge gourd, white-flowered gourd, eggplant and taro are categorized independently as naryu(蓴類)(Vol. 3). In addition, the author listed medicinal herbs by defining them in a separate category(Vol. 4) and included vegetables such as balloon flower, *Codonopsis lanceolata* and burdock that had been classified as vegetables in existing texts, which implies the ambiguous distinction between food vegetables and medicinal herbs.

Meanwhile, an appendix attached to vegetables(蔬類)(vol. 2) of Gwanhyuji introduced 28 types of hogosopum(reference vegetables), 27 types of sannyasokpum(wild vegetables) and 12 types of pohaechaepum(vegetables grown in waterside or at sea). It seems that the author added the items which are not vegetables per se, but can be included as edible plants. Pohaechaepum is intended to encompass vegetables in a broad sense as seaweeds including laver and sea tangle

cannot be included in other categories.³³ Hogosopum represents vegetables that can be consumed as young leaves or sprout rather than in their mature state; Sannyasokpum refers to natural vegetables grown in the wild most of which were extracted from Ben Cao Gang Mu(Compendium of Material Medica), which reveals the author's intent to capture their medicinal aspects as well as their value as edible plants. The issue is also related to the development of cooking methods such as chim, jeo, suk, geon and jeung, devised to reduce or eliminate the toxicity of wild vegetables.

· Appendix. Hogosopum(reference vegetables): Peppermint sprout(薄荷苗), burdock sprout(牛蒡苗), *Hemerocallis fulva* sprout(忘憂菜), Korean angelica sprout(辛甘菜), locust tree sprout(槐芽菜) yellow mung bean sprout(黃豆芽菜), mung mung bean sprout(菜豆芽菜), *Polygonatum odoratum* sprout(菱薹), safflower sprout(紅花菜), great plantain sprout(車輪菜), *Cnidium officinale* sprout(藤蕪), *Elsholtzia ciliata* sprout(香菜), *Rhynchosia volubilis* sprout(鹿藿), *Adenophora remotiflorus* Miquel root(薺萐苗根), hollyhock sprout(蜀葵苗), bamboo shoot(竹筍), *Typha orientalis* sprout(蒲筍) and reed sprout(馬尾菜) (28 species)

· Appendix. Sannyasokpum(wild vegetables): Shepherd's purse(薺), penny cress(馬薺), bracken(蕨), *Osmunda japonica*(薇), *Vicia hirsuta*(小巢菜), fig-leaved goose-foot(災藿), red goose-foot(藜), *Houttuynia cordata*(蕺), *Atractylodes japonica* Koidz. (山芥), alkekengi(酸醬草), *Artemisia vulgaris* var. *vulgatissima*(萵蒿), *Artemisia rubripes*(香蒿), sow-thistle(苦菜), *Stellaria media*(繁縷), curled dock(羊蹄), *Allium microdictyon* Prokh.(黑應耳菜), pine mushroom(松茸), *Agrocybe erebia*(麥蕈), *Umbilicaria esculenta* mushroom(石耳), *Ligularia fischeri*(熊蔬), dongchwi(冬蔬), cheongachae(青兒菜), butterbur(白菜), purple kohlrabi(紫芥), Korean

33_ It is quite interesting that *Jasaneobo* is mentioned as the source of seaweed *fulvescens* (萁山苔), which belongs to *Haechaepum* category.

hedge-nettle(水蘇), cheongokchae(青玉菜) and Hemerocallis fulva flower(黃花菜) (27 species)

· Appendix. Pohaechaepum(vegetables grown in waterside or at sea): Laver(紫菜), mojaban(marine algae),(海藻) Nemacystus decipiens(海蘊), Laminaria japonica(海帶), sea tangle(昆布), curely moss(鹿角菜), sea staghorn(青角菜), hijikia(土衣菜), agar seaweed(海凍草), Porpyra tenera(乾苔), gaengtae(羹苔) and seaweed fulvescens(莓山苔)(12 species)

Seo Yu-gu in Gyoyeojiryu of 『Jeongjoji』 introduced 10 ways of cooking vegetables including preserving in salt(eomjang, 醃藏), directly drying or drying after steaming(geonchae, 乾菜), mixing with medicinal herbs(sikhyang, 食香), marinating vegetables with rice, yeast, salt or oil(jachae, 鮓菜), boiling or blanching before mixing with spices(jechae, 薑菜), preserving raw vegetables by mixing them with spices or salt(jeochae, 菹菜)³⁴, making soup with vegetables or simmering them(jajapchae, 煮燥菜), frilling or steaming(oejeungchae, 煨蒸菜), frying, blanching or searing with oil(yujeonchae, 油煎菜) and crushing, pressing and hardening them like tofu or jelly(sochae, 酥菜) and listed relevant food respectively.³⁵

Next, 『Manhakji』 delves into fruits and is consisted of the four sections of fruits(菓類), those grown on land and trees(祿類), trees(木類) and other trees(雜植).³⁶



34_ In Jeochae Chongnon of Jeongjoji, it is explained that jeochae and eomchae are the same method but the former requires cooking once while the latter refers to repeated steaming or boiling.

35_ As Imwongyeongjeji Jeongjoji(published by Gyomunsa, 2007) translated by Hyo-ji Lee, Sin-ho Jo, Nak-won Jeong and Gyeong-hui Cha has omitted jajapchae, oejeungchae and yujeonchae, this section calls for cautious review.

36_ Referred to the translation of Sun-cheol Park and Yeong Kim, 『Imwongyeongjeji』 Manhakji(1-2) (Rice, Life and Civilization Research Center, Chonbuk University. Published by Sowadang, 2010).

Vol. 2. Fruits(菓類): Plum tree(李), apricot tree(杏), Japanese apricot tree(梅), peach tree(桃), chestnut(栗), jujube tree(棗), pear tree(梨), *Malus sieboldii*(Regel) Rehder(棠梨), Korean apple tree(奈), apple tree(蘋果), *Malus asiatica* tree(林禽), persimmon tree(柿), date plum tree(君遷子), tomato(蕃柿, pomegranate tree(安石榴), Korean-type cherry tree(櫻桃), quince tree(木瓜), Korean angelica tree(山楂), ginkgo tree(銀杏), walnut tree(胡桃), hazelnut tree(榛), *Pinus koraiensis* Siebold et Zuccarini tree(海松子), sawtooth oak(橡), Peppertree Prick-lyash(蜀椒), pepper tree(胡椒), *Zanthoxylum ailanthoides* tree(食茱萸), tangerine tree(橘), *Citrus tachibana*(Makino) C. Tanaka tree(柑), nutmeg tree(榧子) and fig tree(無花果) (30 species)

· Appendix, Sanyagwapum(Grown in the wild): Jibunja tree(地盆子), moorberry tree(豆乙粥), borisil tree(菩提實), yeongjusil tree(瀛洲實), nokgaksil tree(鹿角實) and *Akebia quinata* tree(燕覆子) (6 species)

Vol 3. 나류(蓴類): Oriental melon(甜瓜), Watermelon(西瓜), grape(葡萄), Korean wild grape(散布度), Siberian gooseberry(獼猴桃/다래), *Schizandra* (五味子), *Rubus idaeus* (覆盆子), *Dioscorea batatas* (薯蕷/芋), sweet potato(甘藷), lotus seed(蓮子), water chestnut(菱), thorn lotus(芡), *Kuroguwai* rush(烏芋) and *Sagittaria trifolia* var. *sinensis*(慈姑) (14 species)

Vol. 4. Trees(木類): Pine tree(松), arbor vitae(柏), needle fir(檜), Japanese cedar(杉), *Chamaecyparis obtusa*(栂), Japanese elm(榆), Korean willow(柳), aspen(白楊), locust tree(槐), *Paulownia coreana*(桐), lacquer tree(漆), tree of heaven(春櫟), birch(樺), paper mulberry(楮), Manchurian walnut(楸梓), Japanese sumac(膚木), Korean box tree(黃楊木), ash tree(樺), Japanese privet(女貞), *Sapium sebiferum*(烏白), lesser flowering quince(楂), *Subtripinnata*(棟), Korean honey locust(皂莢), *Acanthopanax sessiliflorus*(五加) and Chinese matrimony vine(枸杞) (25 species)

Vol. 5. Other trees(雜植): Tea tree(茶), bamboo tree(竹) safflower(紅藍), *Cruciferae*(菘藍), indigo(蓼藍), *Lithospermum erythrorhizon*(紫草), castor bean(蓖麻), *Typha orientalis*(香蒲), reed(菱), great water rush(龍鬚), lamp rush(燈心草), river bulrush(荊三稜) and tobacco(煙草) (13 species)

The most striking fact is that naryu(蓴類)(Vol. 3), which has already been mentioned in the previous 『*Gwanhyuji*』 has been listed again here in 『*Manhakji*』. A close look at each list shows that naryu in 『*Gwanhyuji*』 includes 9 types including cucumber, white gourd-melon, squash, eggplant and taro that are all used to prepare side dishes while naryu in 『*Manhakji*』 is mostly fruits such as oriental melon, watermelon, grape, Korean wild grape and *Rubus idaeus*. In that sense, the former can be defined as nachaeryu(蓴菜類) which is close to vegetables while the latter is nagwaryu(蓴果類) which is linked to fruits. The classification reveals the difficulties in defining all naryu collectively as charyu or as gwaryu, which also indicates the diversity of natural plants' genetical attributes. Our ancestor's attempt to distinguish a third category of naryu which is neither vegetable or fruit runs in contrast with us in the modern times. Thus, it is worthwhile to revive the meaning and definition of naryu, which can be defined as the name used to refer to both vegetables and fruits in traditional botany.

From that perspective, naryu in itself deserves attention and is a category worth defining and discussing. Thus, the four categories of gok, chae, na and gwa commonly found in traditional Sallimseo and cookbooks distinguish vegetables found in the natural system from an anthropocentric perspective of sustaining life and represents a classification system that still runs valid in the modern society.

(3) Of the four categories of gok, gwa, na and chae, nachaeryu was greatly valued as food ingredients in the geography of Korea mostly consisted of field and mountains. Thus, the development of food prepared with namul and chaemul was a natural course while the development of recipes which address the toxicity of wild vegetables is a major feature of Korea's food sciences.

That being said, a study on how nachaeryu was introduced and perceived in traditional texts on food and cookbooks can contribute greatly in establishing food sciences. While the term namul is mostly used to refer to vegetables as food, this implies that the classification

of vegetables from a botanical perspective is not compatible with how namul are categorized in food science. While elucidating this matter will require a systematic analysis of all traditional texts on food, this paper will delve into only a part of them, as the topic is out of the scope of this study.

In general, methods of cooking namul can be categorized as saeng(raw state), geon(drying), jeo(pickling), chim(chimchae, salting), suk(boiling) and jeung(steaming)(生乾菹沈熟烝菜) whose results all can be defined as a type of kimchi in a broad aspect, as will be discussed later in detail. Dishes prepared by adding spices to raw cabbage or white radish are commonly found in our table and the raw state of vegetables and eating vegetables in their natural state is recommended in recent days. Meanwhile, the methods of geon, jeo and chim devised to preserve food are typical methods of making various kinds of kimchi. As wild vegetables are dried for a long time to reduce their toxicity and consumed throughout the winter, the vegetable processing methods of geon, jeo and chim are the major cooking methods adapted to the weather and ecological conditions of the Korean Peninsula with cold winter and have given rise to the development of preserved food.³⁷

The fact that the processing methods of saeng, jeo, chim, suk and geon developed both with cabbages and radishes imply that the processing methods of wild vegetables have evolved together with kimchi-derived food.

『*Domundaejak*』(1611) written by Heo Gyun(1569~1618) right after the Japanese invasion paid attention to the relationship between the development of vegetables and their places of origin. Heo introduced the characteristics of food and major producing regions. Of the 33 vegetables, Heo introduces pickled bamboo shoot(Noryeong, Honam), *Hemerocallis fulva*(Uiju), watershield plant(Honam and Haeseo), green laver(Yeongdong), white radish(Naju), clover(Wonju),

37_ Chapter 4, Ecological folklore study of pepper and cabbage kimchi and the establishment of unique customs of Joseon, in *Roots of Joseon Dynasty Kimchi* (Minsokwon, 2013) written by Chaelin Park is an interesting work which delved into the perspective of ecology of food science.

ginger(Jeonju), mustard(Haeseo), garlic(Yeongweol) and green tea(Suncheon) as well as seaweeds such as Sea staghorn(Haeju and Ongjin), Gloiopeltis tenax(Haeseo), agar seaweed, red pepper paste(Hwangju), dried ginseng(Yeongpyeong and Cheorwon) and Polygonum hydropiper fruit(Itaewon). He also wrote that curled mallow, bracken, sea mustard, chive, water parsley, cabbage, Atractylodes japonica Koidzumi,³⁸ pine mushroom and Panus rudis are grown in all places. (Table 9). The universality of curled mallow, bracken and others indicate the prevalence of vegetable dishes in the 17th century cuisine.

Table 9. List of vegetable dishes introduced in 『Domundaekjak』(1611)

Vegetables [蔬菜類]	Detailed classification of vegetables
Pickled bamboo shoot(竹筍醃)(Noryeong, Honam), Hemerocallis fulva(黃花菜)(Uiju), watershield plant(蓴)(Honam and Haeseo), green laver(石蓴)(Yeongdong), white radish(蘿菔)(Naju) and clover(苜蓿)(Wonju) Bracken(蕨薇)/curled mallow(葵)/sea mustard (藿)/chive[薤]/water parsley芹)/cabbage(松)/Atractylodes japonica Koidzumi (朮)/pine mushroom(松茸)/Panus rudis(眞菌)(Cheocho), shiitake mushroom(眞古) and hongchae(紅菜)(Haepo, Gyeonggi) Hwanggak(sea staghorn)(黃角)(Haeseo), sea staghorn(靑角)(Haeju and Ongjin), Gloiopeltis tenax(細毛)(Haeseo), agar seaweed(牛毛), chosi(椒豉)(Hwangju), dried ginseng(蔘脯)(Yeongpyeong and Cheorwon), and Polygonum hydropiper fruit(蔘)(Itaewon) White gourd-melon(冬瓜)(Chungju), eggplant(茄)/cucumber(瓜)/white-flowered gourd(匏蘆)(Cheocho), wild mustard (Hannam, Hoeyang and Pyeonggang) Sea tangle(山芥蒚)(Bukhae), sea mustard(昆布) (Samcheok), sea staghorn (早藿), laver(甘苔)(Honam, Hampyeong, Muan and Naju) and laver(海衣)(Namhae and Donghae) Ginger(薑)(Jeonju), Mustard(芥)(Haeseo), scallion(蔥) (Sangnyeong), garlic(蒜)(Yeongweol), tea(雀舌茶) (Suncheon, Byeonsan)	Chaeryu: Bamboo shoot, Hemerocallis fulva, watershield plant, green laver, white radish and clover Bracken, curled mallow, sea mustard(藿), chive, water parsley, cabbage and Atractylodes japonica Koidzumi Pine mushroom, Panus rudis, shiitake mushroom and hongchae, red pepper paste, dried ginseng, Polygonum hydropiper fruit Naryu: white gourd-melon, eggplant, cucumber, white-flowered gourd and wild mustard Seaweeds: Hwanggak (sea staghorn), sea staghorn, Gloiopeltis tenax, agar seaweed, sea tangle, sea mustard, laver and laver Seasoning: Ginger, mustard, scallion, garlic and tea

38_ Although gwak(藿) in the original text usually refers to soybean leaf or sea mustard and chul(朮) represents glutinous foxtail millet and must be interpreted as vegetable as this falls into the vegetable category, this paper will translate by following the name introduced in Seo Myeong-eung's Bonsa.

Table 10. List of plants consumed during famine in Guhwangmun of 『Sallimgyeongje(1718)』

	List of plants
Grains	Soy flour, barley flour, wheat flour, Glycine Semen Nigra, soymung bean sprout, black sesame, sesame, perilla seeds, Setaria italica(青梁米), Oryza sativa(糯米), Oryza sativa Linné(粳米) and Auricularia auricula-judae
Grown on trees	Bark of Japanses sumac, pine needle, endodermis of pine tree, pine resin, pine nut leaf, bark of Japanese elm, sawtooth oak, hazel, pine nut and pine sprout
Fruits	Chestnut, dried chestnut, red jujube, walnut, dried persimmon, jujube, date

The development of vegetable dishes was further promoted due to the occurrence of famine, which is clearly shown in 『Guhwangmun』 of 『Sallimgyeongje』, where Hong Man-seon introduces how to cook vegetables that can be consumed during famine and the list of such grasses and trees. For example, he says that a person who suddenly consumes food after a long starvation is destined to die and that he must be fed with water added with soy sauce before given porridge and rice.

A close observation of the text shows that 12 types of grains such as soy flour and black bean flour and 10 types from trees such as pine needle and pine nut are listed whereas as many as 25 wild herbal plants such as Poria cocos Wolf., Platycodon grandiflorum root, dried kudzu, Polygonatum odoratum and Polygonum lasianthum var. coreanum root and those grown in the wild such as taro(called toran, toji or toryeon),³⁹

39_ As for taro, the author wrote that, 'Boil and consume taro, which can replace daily staple and help survive a bad harvest.' He also added that, taro is called, 'toran or toji and also called toryeon by people nowadays.' He introduces an anecdote to highlight the importance of taro during famine. "A monk in a temple in Mt. Gakjo planted taro as best as he could, granulated and made bricks with it and built a wall. Although many died after a bad harvest, more than 40 people in the temple survived the famine by depending on the bricks made of taro." Again in 『Geogapillyong』, 『Gosachwallyo』, 『Guhwangchwallyo』 and 『Jemimyo sul』, it is written that, "Although taro is useful in alleviating hunger, it is unfortunate that people do not know it or wait to die without planting it even after acknowledging its value. This is a lesson to be remembered by kings." (Institute for the Translation of Korean Classics, Translated version of Sallimgyeongje, p111). It can be inferred from the text that taro which is commonly consumed nowadays was an unknown crop rather than being a staple back in the 18th century.

Brassica rapa⁴⁰ and shepherd's purse are introduced. That is, the author paid close attention to wild vegetables as being useful during famines. (Table 10).

In the text, it says, “After February, farm vegetables, wild vegetables and leaves of Chinese hackberry, Sawleaf Zelkova and foremost mugwort are mixed together with flour and consumed to alleviate starvation. As flour must be mixed together, make sure to save on grains ahead of time and consume them after mixing them with other edible plants”, which stresses the importance of vegetables grown in the fields and the mountains from spring. While discussing the methods of making jang(醬), the author said cheongjang(淸醬) made with bean leaf and salt is superior to dujang(豆醬) made with beans and introduced jang made by processing Codonopsis lanceolata and pulverized Platycodon with salt water and jang made with fruit of Japanese elm, which are designed to help people fight starvation.

『Jeungbosallimgyeongje』 listed preservation method of 22 types of vegetables including eggplant, cucumber, oriental melon, watermelon,⁴¹ white radish, turnip, white gourd-melon, squash, taro, Ligularia fischeri, garlic, ginger, scallion, bamboo shoot, Rumex japonicus Houttuyn, Korean angelica, cabbage, Aralia elata sprout, pine mushroom, bracken, lettuce and saengchae by adding a separate category of Chaepumsujangbeop(vegetable harvest and preservation method), hinting the growing need for a systematic knowledge on vegetables after the mid 18th century.



40_ Raphanus sativus L. root when grilled and consumed in early morning prevents hunger and cold.

Various parts of Brassica rapa can be consumed in all seasons - sprouts in the spring, leaves in the summer, stem in the fall and roots in the winter - and help prepare for bad harvest.

41_ Oriental melon and watermelon are classified as fruit in Sallimgyeongje.

[瓜果, 青梅, 桃, 李, 林檎, 小棗, 葡萄, 蓮蓬, 菱角, 甜瓜, 梨, 柑橘, 松子, 栗, 紅棗, 紅柿, 石榴, 金橘] while Jeungbosallimgyeongje lists them as vegetable.

Fruit preservation method in Jeungbosallimgyeongje:

青瓜 海松子 胡桃 栗子 紅棗 梨子 紅柿 桃子 林檎 石榴 葡萄 柑橘

Vegetable preservation method in Jeungbosallimgyeongje: 茄子 黃瓜 甜瓜 西瓜 蘿菔 蔓青根

冬瓜 南瓜 芋根 雄蔬 大蒜 生薑 蔥根 竹筴 羊蹄根 當歸根 蒜根 木頭菜木 松栂 薇蕨 蒜薹

萵苣薹 生菜

(4) The tendency is also found in the text on recipes in Chiseonmun and the types of vegetable dishes and their recipes introduced in Jeungbosallimgyeongje were greatly expanded compared to Sallimgyeongje.

Around 25 types of vegetable pickling methods(eomgwachae, 醃瓜菜) are recorded in the vegetable section of Chiseonmun of Sallimgyeongje including simmering(jachae, 煮菜), drying(geoncha, 乾菜, soechae 晒菜), steaming then drying(jeunggeonchae, 蒸乾菜), blanching then pickling(sukjabeop, 熟鮮法), blanching with vinegar or frying before salting(jeonyeombeop, 煎鹽法), adding boiled then cooled water, lees and salt to vegetable for preservation(joyeomchae, 糟鹽菜) and soaking in water before pickling(chimjeochae, 沈菹菜) while 15 types of vegetables including bamboo shoot, bracken, swede, garlic, Typha orientalis sprout, vinegar pickled lotus root, gardenia, white gourd-melon, eggplant, mung bean sprout, ginger, chive, Hemerocallis fulva, Indian mustard and Ligularia fischeri are listed. (Table 11).⁴²

In comparison, the vegetable section of Chiseonmun in Jeungbosallimgyeongje, Chiseonpyeon runs into stark contrast with the original version by listing as many as 46 types of vegetables and 87 kinds of cooking methods. In terms of cooking method, the later version introduces various methods including salting(酢法, 鹹菹法), blanching and salting(酢熟), boiling down in soy sauce(醬茄法, 茄爛法), winter chimchae method(沉冬月菹法), summer chimchae method(夏月沈菹法), pickling with garlic(蒜菜), pan frying(煎菜) and making soup(羹菜) in addition to the above methods of drying(geonchae), steaming then dring(jeunggeon), blanching then pickling(sukja), blanching with vinegar or frying before salting(jeonyeom), adding boiled then cooled water, lees and salt to vegetable for preservation(joyeom) and soaking in water before pickling(chimjeo) while the cooking methods appropriate for different types of vegetable are also classified and listed. (Table 12).



42_ Referred to the translation of the Institute for the Translation of Korean Classics, translated version of 『Sallimgyeongje』(1982).

Table 11. Vegetable pickling methods introduced in the vegetable section of Chiseonmun of 『Sallimyeongje(1718)』

	List of pickled vegetable
Simmering (煮菜)	Method of simmering bamboo shoot(煮新笋法)
Drying (乾菜/晒菜)	Drying bracken(乾蕨菜), drying swede(晒薑菜), drying garlic stem(晒蒜薹)
Steaming then drying (蒸乾菜)	Drying bamboo shoot(晒筍乾)
Blanching then pickling (熟鮮法)	Pickled bamboo shoot(造熟筍鮮), pickled Typha orientalis sprout(造蒲筍鮮), pickled lotus root(藕梢鮮) and pickled gardenia(薔蔔酢)
Blanching with vinegar or frying before salting (煎鹽法)	Salted garlic(蒜茄), salted garlic and cucumber(蒜黃瓜), salted garlic and white gourd-melon(蒜冬瓜), salted mustard powder(芥末茄), cooked mung bean sprout(豆芽菜), vinegar pickled ginger(醋薑)
Adding boiled then cooled water, lees and salt to vegetable for preservation (糟菜法)	Pickled ginger(糟薑), pickled eggplant(糟茄), pickled cucumber(糟瓜菜), pickled chive(淹韭菜), pickled chive flower(淹韭花), pickled Hemerocallis fulva(黃花菜, 韮桂菜, also known as 廣菜))
Soaking in water before pickling(침저채(沈菹菜))	Pickled eggplant and cucumber(茄瓜沈汁菹), Pickled Indian mustard(山芥沈菜), pickled Typha orientalis(香蒲菹鮮, yellow sprout of Typha orientalis), Ligularia fischeri(熊蔬, 脚瑯))

In case of cucumber, various methods of chimchae has developed including pickling with garlic(sanbeop, 蒜法), boiling down with soy sauce(nanbeop, 爛法), making sobagi or cucumber kimchi(damjeobeop, 淡菹法), salting(hamjeobeop, 鹹菹法), making oiji or pickled cucumber(sukjeobeop, 熟菹法), pickling in mustard(gaechaebeop, 芥菜法), pickling in lees(jochaebeop, (糟菜法), pickling in water mixed with jang(chimjeupjangbeop, (沉汁醬法), salting(yeomeopbeop, 鹽掩法) and pickling in salted shrimp(hayeomjeupbeop, 蝦鹽汁法) and collectively, they can be classified as types of cucumber kimchi.

While chimjeochaе, a method for preserving vegetables for a long time, of only a few species including eggplant cucumber, mustard and *Typha orientalis* was introduced in 『*Sallimgyeongje*』, cabbage kimchi was introduced in 『*Jeungbosallimgyeongje*』 in addition to various types including eggplant kimchi, white gourd-melon kimchi, radish sprout kimchi, *Typha orientalis* kimchi and water parsley kimchi. While the two texts are separated only by some 50 years, it is noteworthy that food preservation method evolved from preserving in salt and vinegar to chimjeochaе. The change along with the increased awareness of food useful in famines during the 18th century helped expand the number of edible vegetables and their cooking methods, resulting in the development of kimchi made with various vegetables.

Nevertheless, 『*Jeungbosallimgyeongje*』 still tends to focus more on the cooking methods of vegetables such as cucumber, white gourd-melon and eggplant,⁴³ which is consistent with other cookbooks written since the 17th century which leads to cabbage kimchi becoming very popular in the modern times of the 20th century.

43_ As pepper paste and squash are mentioned in *Jeungbosallimgyeongje*, *Gunhakhoedeung* (mid 18th century) presumed to be a review of *Jeungbosallimgyeongje* mostly introduces vegetables (nachaeryu). SW Lee, *ibid*, p320.

- 〈藏菜法〉藏生彩法, 藏木頭法, 藏松茸法, 藏竹筴法, 藏晒瓜法, 藏西瓜法, 藏冬瓜法, 藏南瓜法, 藏黃瓜法, 藏生薑法, 藏葱根法, 藏大蒜法, 收蒜薑法, 收芋根法, 收茄子法, 收蘿菔法, 藏松菜根法, 藏茼蒿薑法, 藏熊蔬法, 藏羊蹄法, 藏當歸(辛甘菜)法
- 〈作菜諸品〉醃瓜菜吉日法, 造乾菜法, 乾藏法, 曬蒜薑, 蒸乾菜法, 木頭菜法, 作筴菜法, 竹筴或煨或煮, 蒲筴法, 茄子作菜作炙, 茄爛法, 芥末茄法, 蒜冬瓜法, 蒜黃瓜法, 松菹法, 黃花(一名萱草, 一名廣草, 萱草三別種)菜法, 熊蔬菜, 菊花菜法

Table 12. Vegetable cooking methods introduced in the vegetable section of Chiseonmun in 『Jeungbosallingyeongje(1766)』

	List of vegetable cooking methods
Bamboo shoot (竹笋)	Simmering freshly harvested bamboo shoot(煮新筍法), salting, grilling and simmering, steamed bamboo shoot(蒸), salting(竹笋酢熟)
Typha orientalis sprout (蒲笋)	Salting(酢法)
Lotus stem (藕梢)	Salting
Gardenia (薔薇)	Salting
Eggplant (茄子)	Pickling in garlic(蒜茄法), boiling down with soy sauce(醬茄法), boiling down(茄爛法), eggplant kimchi in winter(沉冬月茄菹法), preserving with taro, eggplant kimchi in summer(夏月沉茄菹法), pickling with lees(糟茄法), making skewered eggplant
White gourd-melon(冬瓜)	Pickling in garlic(冬瓜蒜法), pan-fried white gourd-melon(冬瓜煎法), white gourd-melon soup(冬瓜羹法), white gourd-melon kimchi(冬瓜菹)
Cabbage (菰)	Making kimchi(沉菹法), pickling in mustard(菰芥法)
Cucumber (黃瓜)	Pickling in garlic(黃瓜蒜法), boilingn down cucumber(黃瓜爛法), cucumber sobagi(黃瓜淡菹法), Yongin oigi(龍仁淡瓜菹法), salting(黃瓜鹹菹法), oigi or pickled cucumber(黃瓜熟菹法), pickling in mustard(黃瓜芥菹法), pickling in lees(糟黃瓜法), soaking in water mixed with jang(沉汁醬法), salting(鹽淹法), pickling in salted shrimp(蝦鹽汁法)
Ginger (生薑)	Pickling in vinegar(醋法), pickling in lees(糟薑), ginger root kimchi(薑鬚菹法)
Turnip (蔓菁)	Turnip kimchi(蔓菁菹), steamed turnip(蔓菁蒸)
White radish (蘿菴)	White radish dongchimi(蘿菴凍沉菹法), pickled white radish(沉蘿菴鹹菹法), boiled down white radish(蘿菴熟菹法), radish sprout kimchi(蘿菴黃芽菹)
Scallion (蔥)	Skewered scallion
Chive (韭)	Pickled chive(淹韭菹法), pickled chive flower(淹花法), blanched chive
Garlic (蒜)	Pickling in vinegar(醋蒜法), pickling in lees(糟蒜法), grilled garlic stem(蒜薹炙法)
Taro (芋)	Also known as 土卵. Taro soup(羹法), taro stem soup(芋美莖), taro stem and root(芋莖本), taro leaf wrap, syrupe taro
Typha orientalis (旱芡(香蒲))	Typha orientalis kimchi(香蒲菹法)/mustard kimchi(山芥菹法)/pan-fried lettuce stem(高苣薹菜法)
White-flowered gourd (匏)	White-flowered gourd(菜法)
Purple onion (紫蔥)	Boiling down in soy sauce(醬法)
Water parsley (芹)	Blanching then mixing with pepper paste, water parsley soup(芹羹), water parsley kimchi(芹鹹菹) /Mustard leaf kimchi(芥菹)
Curled mallow(冬葵)	Curled mallow soup(冬葵羹法)
Other	Crown daisy(艾芥菜), clover(苜蓿菜), Korean angelica stem(當歸莖), Rumex japonicus Houttuyn leaf(羊蹄菜), Aralia elata sprout(木頭菜), Hemerocallis fulva(萱), Hemerocallis fulva(黃花菜), Atractylodes japonica sprout(朮芽), Chinese matrimony vine(枸杞), chrysanthemum(菊), pine mushroom(松茸), oyster mushroom(真茸), gyunsim(菌草), salted Codonopsis lanceolata, salted balloon flower(沙參桔梗佐飯法), salted sea staghorn(青角佐飯法), boiled down safflower(造紅花子法), pan-fried apricot seed(酥杏仁法), salted walnut(胡桃佐飯法), boiled down Japanese prickly ash(煎川椒法), simmering dried vegetable(蒸乾菜法), steaming wild pine mushroom(遊山蒸松茸法), steaming wild bracken(遊山蒸蕨法)

Table 13. List of vegetable dishes listed in 『*Eumsikdimibang*』 (around 1670)

List of vegetable dishes	Vegetable pickling methods	Listed species
Donghwanarami /donghwaseon/ donghwadonchae /donghwajyeok /gajineurami /gajijim`oejim) / oehwachae /nyeongeumchaedyeok/ suktang/syuntang/sangatchimchae /japchae(oechae, muu, daetmuu, jini, syeongi, pyogo, syongi, nokdogiram, dorat, gemuk, geonbak, gojagi, nai, minari, pa, dulheup, gosari, swieomcho, donghwa, gaji, saenggang, geongang, chogang, hocyo, chyeoncho, chamgiram, jyeonjiryong, jingara(28 species)	Boksyonggan/ Syubak · donghwagan/ donghwa/ gadigan/gorari/ manal/geongang/ bisinameul (sueomcho)` sangat`pa`manal _oe`gaji	White gourd-melon, eggplant, cucumber, lotus root, foremost mugwort, watershield plant, Indian mustard, white radish, rhapanus sativus L. root, Panus rudis, Umbilicaria esculenta mushroom, shiitake mushroom, pine mushroom, mung bean sprout(mung bean oil, balloon flower, clover, dried gourd shavings, shepherd's purse, water parsley, scallion, Aralia elata sprout, bracken, Korean angelica, ginger, dried ginger, vinegar pickled ginger, pepper, Rubia akane and watermelon (30 species)

(5) As mentioned above, vegetables were the main focus of preserved food before the development of kimchi. 『*Eumsikdimibang*』 (around 1670) written by Jang of the Ahn clan(1598~1680) of the 17th century, which is noted as the oldest cookbook written in Korean(hangeul), lists 9 types of cooking methods including white gourd-melon, eggplant, cucumber, lotus root, foremost mugwort, *Brasenia schreberi*, mustard leaf, bracken and japchae(19 vegetables),⁴⁵ among which most are related to vegetables with five, three and two recipes of white melon-gourd, eggplant and cucumber introduced respectively. In addition, the cooking method of soaking in water lists three types(garlic, ginger(dried ginger) and bisi vegetables) and two types(peach and watermelon. Thus, dishes prepared mostly with naryu can be called nachaeryu instead of chaesoryu. (Table 13).

■

45_ Han Bok-ryeo (previously-mentioned book, 2003) reported that 19 vegetables were used in japchae. For reference, a total of 28 vegetables including “oechae, white radish, raphanus sativus L. root, oyster mushroom syeongi, shiitake mushroom, pine mushroom, mung bean oil, balloon flower, clover, dried white-flowered foud, gojagi, sheperd's purse, water parsley scallion, Aralia elata sprout, bracken, Korean angelica, white gourd-melon, eggplant, ginger, dried ginseng, vinegar pickled ginseng, pepper, Chinese pepper, sesame oil, soy sauce, jingar” are actually mentioned in the text. ”

Table 14. List of nachaeryu dishes listed in 「Jusaui(酒食議)」 section of 『Gyuhapchongseo (1815)』 (Referred to the translation of Yang-wan Jeong for the words in brackets)

	List of nachaeryu
Chimchae (治膳:침치류)	Syeotbakji(셋박지(비치, 무우, 젓, 청각, 마늘, 고초 등숙)), eoyukchimchae(어육침치(魚肉浸치)), donggwaseokbakji(동과석박지(冬瓜석박지)), dongchimi(동침이(凍沈치)), donggwachimchae(동과침치(冬茄浸치)), dongji(동지(무우지)), nyongingwajibeop(농인과지법(龍仁黃瓜沈菹法)), sangatchimchae(산갓침치(山芥菹))/nabakchimchae(나박침치), jangjanji(장뽕지(醬倅지)), jyeonbokchimchae(전복침치(전복浸치))
Vegetables (치소뉴(菜蔬類))	Syongijjim(송이쌈), dyuksunchae(독순치), simgamcho(신감초(승검초)), donggwaseon(동과선), wolgwachae(월과치(호박나물)), imja(임즈)jwaban(좌반), dasa(다스)majwaban(마좌반), seokjwaban(섶좌반), memil(메밀)/parae(파래)/gamtae(감타)/meoyuk(머육(미역))
Vegetable pickling method (제치수장법 (諸菜收藏法))	Nabok(나복[무오])/manchyeong(만청[숫무오]), donggwa(동과)/wolgwa(월과[호박]), oe(외)/gaji(가지), syongi(송이), mukduchae(묵두치 [두릅]), baechae(백치)bburi(뽕학), simgamchoburi(신감초뽕희), gosari(고사리), yangyjeja(양제즈 [소로장이]), dyuksyun(독순), maneu(마늘), gochyo(고초)
Fruit processing method (諸果收藏法)	Chestnut(쌍늬), pear(비), Korean apple, ripe persimmon, persimmon, pomegranate(석뉴), sweet potato(감즈), peach(골복성화), grape(포도), watermelon(슈박), oriental melon(흙외)

Next, cookbook written in hangeul by an old aristocrat with the sur name Ha for the purpose of being read by young women called 『Jubangmun』⁴⁶ is presumed to have been produced in the late 17th century, similar with 『Eumsikdimibang』 and 『Yorok』 (around 1680).⁴⁷ List of the vegetable dishes listed in 『Jubangmun』 including donghwaneurum(東花造泡), donghwajeon(東花煎), eogajiseon(茺茄菜・茺茄善沈菜), deodeokjaban(沙蔘佐飯), yanghajeok(襄荷炙), oegajidunanbeop(藏茺茄法), seonggangchimhananbeop(沈薑法), timgosaribeop(沈蔘法) and chyeongdaekongtimhananbeop(沈靑太法) shows that the vegetable recipes were developed around white melon-gourd, eggplant, Codonopsis lanceolata, myoga and bracken.

46_ SW Lee. ibid, p304.

47_ The list of kimchi introduced in Yorok presumed to have been written during the reign of King Sukjong includes 凍沈, 過凍沈菜, 沈白菜, 過冬菹, 沈冬果, 蒜菜, 沈蔘, 沈靑太, 無鹽沈菜, 淹黃茺, which are all chimchae made with salt alone and it seems that the book was written before chilis were used and when Rubia akana was used instead. SW Lee. ibid, p306.

Next, 『*Gyuhapchongseo*(1809),』⁴⁸ one of the major cookbooks written in hangeul around 1800 by the female scholar Lee (pen name Bingheogak), is consisted of five chapters including Jusau on alcohol and food, Bongimchik on clothes and needlework, Sangarak on daily life in the countryside, Cheongnanggyeol on treating various diseases and Sulsuryak on folk beliefs and can be classified as Sallimseo like Sallimgyeongje rather than being a cookbook.

In the section of Jusau where vegetables are discussed, the method of pickling vegetables in salt water mentions white radish, Brassica rapa, white melon-gourd, squash, cucumber, eggplant, pien mushroom, Aralia elata sprout, cabbage root, Korean angelica, bracken, Rumex japonicus Houttuyn, bamboo shoot, garlic and chili; the method of chimchae introduces dishes such as seokbakji, eoyukchimcha, donggwaseokbakji, dongchimi, donggwachimcha, dongji, Yonginoichimchae, sangatchimcha, nabakchimchae, jangjjanji, jeonbokgimchi; while vegetable dishes including pine mushroom, bamboo shoot, Korean angelica, white gourd-melon, squash, perilla seed, sea tangle, seokgwaban, buck wheat, green laver, sugar beet and sea mustard are introduced. (Table 14). The text encompasses naryu and chaeryu in general and implies that the traditional cuisine was developed with focus on vegetables(nachaeryu).

(6) In Ho-jik Kim's Joseonsikmulgaeron(1945), which clearly shows the expanded scope of vegetables and their consumption, distinguishes the food ingredients of Joseon collected and consumed throughout the nation into raw food and processed food in an attempt to define the category of the food ingredient of Joseon before explaining that more than 635 species including 17 types of grain, 28 types of vegetables(sochaeryu), around 300 types of wild vegetables, 10 types of seaweeds, around 80 types of mushrooms, 12 types of fruits, 8



48_ Referred to Gyuhapchongseo (Revised edition) translated by Yang-wan Jeong. Published by Bojinjae (2008).

types of meat(of animal and poultry as well as their eggs) and around 180 types of fish by listing the food ingredients by category. Kim also discusses processed foods by distinguishing them into meju(fermented soybean lump), pickled food, jellied food, tofu, salted seafood, fish egg and salted fish. (Table 15).

Among the introduced vegetables, 28 types of sochaeryu are categorized again into three groups - first, 16 species with edible leaves and stems including cabbage, mustard leaf, spinach, potato and taro; second, 4 species with edible roots including white radish, turnip, sweet potato and burdock; and third, 5 gawchaeryu⁴⁹(species with edible fruit) including cucumber, squash, oriental melon, watermelon and white gourd-melon.⁵⁰

49_ Although gwachaeryu in page 2 of Joseonsikmulgaeron is written as ‘果菜類’, this seems to be a typo of ‘瓜菜類’. If the author avoided using the word 瓜菜 because oriental melon and watermelon cannot be considered as 果實, it will be more appropriate to define the category using the traditional term nachaeryu. Seo Myeong-eun in Bonsa while explaining that gwara(果蔬) is distinguished into gwa(果, fruits from trees) and na(蔬, those grown on land) proposed his perspective of regarding 蔬菜類 as a broader term than 瓜菜類; Seo Yu-gu in his Gwanhyuji and Manhakji also used the word naryu(蔬類) which encompasses nachae(蔬菜) and nagwa(蔬果). In that sense, using the word nachaeryu when referring to squash, white melon-gourd and eggplant along with oriental melon and watermelon seems to be the traditional method, but Joseonsikmulgaeron confirms that the terminology has not been passed down.

50_ While the classification of parts of vegetable and wild vegetables mentioned in Joseonsikmulgaeron require an analysis of how edible plants in the traditional times were recorded, this shall be left for further study as it concerns a separate topic. For reference, Jiuhuang Bencao (Materia Medica for the Relief of Famine) written by Zhu Su(1360~1425), the fifth son of the founder of Ming Dynasty is acknowledged as the most systematic analysis of edible plants consumed during famine and as the name suggests is an encyclopedic text which lists grasses and plants that can be consumed during famine and their pictures. The last part (volumes 46 to 59) of Seo Gwang-gye’s Nongjeongjeonseo widely read during the late Joseon period has reproduces texts from Jiuhuang Bencao. Here, the author divided vegetables grown on land(chobu) and trees(mokbu) that are again divided into groups in which their leaves(葉可食), roots(根可食) and fruits(實可食) can be consumed respectively. It is noteworthy as the classification can easily be applied in daily lives. Most of the section is spared for explaining chobu vegetables whose leaves are consumed where wild ginger, Chinese milk vetch, Hemerocallis fulva, Astragalus Root and Cnidium officinale Makino are introduced. In case of chobu vegetables with edible fruits, Codonopsis lanceolata, lily, Asparagus cochinchinensis Merrill, Broadleaf Liriope and Atractylodes ovata (Thunb.) DC. are listed; examples of chobu vegetables with edible fruits include adlay, wild barley and sponge gourd sprout; mokbu vegetables with edible leaves include tea tree and Zanthoxylum Bungeanum sprout; mokbu vegetables with edible fruits include sawtooth oak, fig and wild quince; and mokbu vegetables with edible leaves and fruits include coriander, wild garlic, wild white radish, shepherd’s purse and perilla.

Table 15. List of food ingredients introduced in 『Joseonsikmulgaeron』

Category	List
1. Grains (穀實類)	Rice(米(粳糯)), barley(大麥(裸麥)), oat(燕麥), wheat(小麥), millet(粟(粳糯)), hog millet(黍稷糯)), sorghum(蜀黍(稷糯)), corn(玉蜀黍(稷糯)), barnyard millet(稗), buck wheat(蕎麥), sesame(胡麻), soybean(大豆), red bean(小豆), mung bean(綠豆), kidney bean(菜豆), cowpea(白豇豆) and pea(豌豆) (17 species)
2. Vegetables (蔬菜類)	<p>△ Vegetables with edible leaves (葉莖類): Cabbage(白菜), mustard leaf(芥子菜), water parsley(芹), spinach(菠薐草), chard(碧蓮採), lettuce(莖蒿), crown daisy(春菊), curled mallow(冬葵), chive(韭), scallion(葱), spring onion(冬葱), garlic(大蒜), ginger(生薑), bamboo shoot(筍), potato(馬鈴薯) and taro(里芋)</p> <p>△ Vegetables with edible roots(根菜類): White radish(蘿蔔), turnip(蕪菁), sweet potato(甘藷) and burdock(牛蒡)</p> <p>△ Vegetables with edible fruits(果菜類): Cucumber(胡瓜), squash(南瓜), oriental melon(甜瓜), watermelon(西瓜) and white gourd-melon(冬瓜) (28 species)</p>
3. Wild vegetables (山野草類)	<p>△ Vegetables with edible young sprout(嫩葉), bud(芽) and stem(莖): Autumn Elaeagnus, goldenrod, Cerastium fischerianum, black nightshade, maegarinarum, Dryopteris crassirhizoma NAKAI, horabidae, golden lace patrinia, Patrinia villosa Jussieu, Masculine wormwood and Ligularia fischeri (227 species)</p> <p>△ Vegetables whose edible parts are underground(地下部): Polygonatum odoratum var. pluriflorum, lily, Ailisma canaliculatum, dog-tooth violet, balloon flower, Adenophora remotiflorus Miquel root, Artemisia vulgaris var. vulgarissima, Scrophularia ningpoensis, Codonopsis lanceolata, Chinese cucumber, wild chive, Maximowicz Hololeion, lily, seumbae, makju, pygmy arrowhead, wild chive, Codonopsis lanceolata and Dioscorea batatas (23 species)</p> <p>△ Vegetables with edible bark(樹皮): Pine tree and Japanese elm</p> <p>△ Plants with edible pollen(花粉) and petal(花瓣): Pine pollen, royal azalea petal and chrysanthemum petal</p> <p>△ Vegetables with edible pulp(果肉): Akebia, Sorbus alnifolia, Autumn Elaeagnus, Caesalpinia sappan L., black nightshade, wild apricot, Chinese hackberry, mountain mulberry and yamabaushi (36 species)</p> <p>△ Vegetables with edible seed(種子): Chinese cork oak, ginkgo tree, Zanthoxylum coreanum, hazel, nutmeg tree, sawtooth oak, Castanopsis cuspidata var. thunbergii, Kuroguwai rush, Corylus sieboldiana var. mandshurica, nut pine, walnut tree, Korean honey locust, Manchurian walnut and muram tree (14 species) / Total of around 300 species</p>
4. Seaweeds (海藻類)	Sea tangle, sea staghorn, laver, sea mustard, green laver, Artemisia selengensis, sea urchin and agar seaweed (10 species)
5. Mushrooms (菌蕈類)	Lactarius lacticolorus, dokjureumbeoseot, jeomaekjureumbeoseot, Marasmius chamaecyparid, meadow sanjureumbeoseot, saejureumbeoseot and sanbokbeoseot (Around 80 species)
6. Fruits (果實類)	Chestnut(栗), pear(梨), walnut(胡桃), Korean apple(林檎), jujube(棗), plum(李), persimmon(柿), Korean-type cherry(櫻桃), grape(葡萄), apricot(杏), tangerine(柑橘), (12 species)
7. Meat (獸肉類)	Cow(牛), pig(豚), boar(猪), dog(犬), roe deer(獐), chicken(鷄), pheasant(雉) and egg(鷄卵) (8 species)
8. Fish (魚介類)	Greenling, Thryssa koreana, doyoee, ray, lenok, pond smelt and green eel goby (Around 180 species)

Next, the author separately defined wild vegetables which falls into vegetable(*chaemul*) category, introduced around 300 species and divided them into the following six groups by their edible parts.⁵¹

First is vegetables with edible young sprout(嫩葉), bud(芽) and stem(莖);⁵² second is vegetables whose edible parts are underground(地下部), which includes 23 species including *Polygonatum odoratum* var. *pluriflorum*, lily, balloon flower, wild garlic, *Codonopsis lanceolata*, wild chive and *Dioscorea batatas*; third is vegetables with edible bark(樹皮), which includes 2 species of pine tree and Japanese elm; fourth is plants with edible pollen(花粉) and petal(花瓣), which includes three species including pine tree, royal azalea and chrysanthemum; fifth is vegetables with edible pulp(果肉),⁵³ which includes 36 species including *Akebia*, *Sorbus alnifolia*, Autumn *Elaeagnus*, strawberry tree, Siberian gooseberry, *Pyrus montana* Nakai fruit, wild cherry, Korean wild grape and mountain mulberry; and sixth is vegetables with edible seed(種子), which includes 14 species including Chinese cork oak, ginkgo tree, *Zanthoxylum coreanum*, hazel, nutmeg tree, sawtooth oak, and walnut tree.

It is quite interesting that as many as 227 types of plants including Autumn *Elaeagnus*, cottonweed, masculine wormwood and *Ligularia fischeri* are introduced as vegetables with edible young sprout, bud and stem. The fact that such a wide variety of plants were recognized and classified as edible plants in the mid 20th century runs in stark contrast with *Sallimseo* and cookbooks written in the 18th and the 19th century. It can be said that modern study and academic classification on wild vegetables were conducted and enabled the culmination of such vast amount of knowledge.



51_ In the original text, names of plants are written in Japanese and followed by Korean names, many of whom are missing. Although the paper attempted to translate them in general, a more appropriate translation is required in the future.

52_ 嫩葉 is a Japanese word which means young sprout while 芽莖 represents bud and stem.

53_ The text that introduces those with edible pulp includes creepers like Siberian gooseberry and Korean wild grape, shrubs like *Rubus idaeus* and Korean-type cherry, it seems more appropriate to use the term *nayuk*(葷肉) instead as the category is mostly consisted of *nagwaryu*(葷果類) vegetables.

Another noteworthy finding is the widely used expression of 'namul'. Of the 227 wild plants, as many as 49 species including pulsonnamul(cottonwood), cheongnadonamul(*Cerastium fischerianum*), maegarinaamul, hwalnamul(rattlebox), banduinamul(*Cryptotaenia japonica*), gajigolnamul(*Prunella vulgaris* var. *lilacina*), deulkkaenamul(perilla), kkaenamul(perilla seed), baechunamul(cabbage), gireumnamul(*Peucedanum terebinthaceum*), dolnamul(stringy stonecrop), mullenamul(*Hypericum ascyron*), chamnamul(*Pimpinella brachycarpa*), dambaenamul(annual fleabane) and jobamnamul(narrow-leaved hawkweed) were listed using the expression 'namul', which accounts for 22% of the listed wild plants. The percentage is raised further if the plants that are called 'namul' including amaranth, bracken, rough aster, *Portulaca oleracea* L., *Aralia elata* sprout, goldenrod, *Cirsium setidens*, *Achyranthes japonica* Nakai, *Ligularia fischeri* are added. Although this paper will not discuss the matter in detail, a study on the expansion of the category of namul through comparison with edible plants listed in texts of Joseon is well worth delving into.

Next, 『*Joseonsikmulgaeron*』 while explaining processed food emphasizes pickled food(漬物類) as the most important category. While discussing how important kimchi, a type of pickled food, was as a side dish in each household in Joseon, the author distinguishes kimchi into salted kimchi(鹽漬) and kimchi made with jang(醬油漬), explains the respective recipe and lists the specific types including “donggimchi, dongchimi, sokbakji, biseurugimchi, bogimchi, nabakgimchi, oisogegi, gajigimchi, kkakdugi and jangchi.” The text implies that pickled foods which were mostly made with nachaeryu developed since the 18th century are now referred collectively as different kinds of kimchi.

In addition, the author systematically explains the methods of processing food ingredients including meat and vegetable, introduces six processing methods including cooking with fire(炊食) (for grains), steaming(蒸食) (for grains and fish), simmering(煮食) (for meat, fish, vegetable and seaweed), cooking with fire(燒食) (for meat, fish

and seaweed), pickling(漬食) (for vegetables) and consuming in raw state(生食) (for beef, fish and vegetable),⁵⁴ which is less than the 10 recipes introduced by Seo Yu-gu in his Jeongjoji of Imwongyeongjeji, but is significant in that it shows pickling vegetables or making kimchi being recognized as one of the major cooking methods.

(7) Meanwhile 『Joseonyorijebeop』 written by Sin-yeong Bang (1890~1977) who greatly influenced in establishing the food culture of the modern Korean society after liberation from Japan is very useful in observing the significant expansion of edible plants(namul) and the following development of namul dishes.

『Joseonyorijebeop』 which was published up to the 33rd edition by 1958 was first “organized with a strong conviction when I was still young and inexperienced by trying to record down one by one by asking my mother.” (Author’s introduction in the 8th edition published in 1937) when the author was in her late teens. With each revision, the text added up to a grand Korean cookbook and her earnest wish can be read in the introduction which says, “I hope that the book serves helpful and useful in the households of Joseon, however trifle.”

In the second edition 『Mangapilbi Joseonyorijebeop』 published in 1918, the author introduces namul recipes for making 17 dishes including gajinamul(eggplant), gobinamul(*Osmunda japonica*), doratnamul(balloon flower), doratsaengchaeu(balloon flower, uncooked), munamul(white radish), musaengchae(white radish, uncooked), minarinamul(water parsley), sukjunamul(mung bean sprout), ssukgatnamul(crown daisy), siraejinamul(dried radish greens), oenamul(cucumber), japchae(sauteed vegetables with potato noodles), kongnamul(bean sprout), putnamul(young vegetable), hobaknamul(squash), juksunchae(bamboo shoot) and wolgwachae(*Cucumis melo* var. *conomon* fruit), which is quite impressive that most of vegetable dishes prepared with what were



54_ HJ Kim, *ibid*, p44.

previously classified as nachaeryu are now referred to as namul. In addition, twenty types of kimchi including nabakkimchi, baechaekimchi and jeonbokkimchi are listed in the section, chimchae recipes where the author collectively calls most of the dishes referred to as chimchae in 『*Gyuhapchongseo*』 as kimchi, showing that these dishes were integrated as kimchi as early as this period.

『*Mangapilbi Joseonyorijebeop*』 published in 1921 seems to be a second print and does not have significant changes in the list. It lists the same 17 types of namul recipes while just one dish of Yonginoeji was added to chimchae recipes. As Yonginoeji was introduced in Jeungbosallimgyeongje and in Gyuhapchongseo, the dish is likely to have been added by referring to these texts.

However in the 8th edition printed in 1937 titled, 『*Jubuui Dongmu Irilhwalllyong Joseonyorijebeop*』, the list is greatly expanded. (Table 16).⁵⁵ The number of dishes were greatly increased from the 1918 edition - namul dishes are divided into namul and saengchae(uncooked) while a total of 29 dishes among which namul consists of 23 dishes including bangnamul(white gourd-melon) and chwinamul(rough aster) and saengchae has 6 dishes including the newly added gyejachae(leaf mustard) and tangpyengchae(mung bean jelly salad). The change represents a significant development of namul dishes, which is, as attested by 『*Joseonsikmulgaeron*』, based on more nachaeryu being perceived as edible plants.

Pickled food which had been collectively referred to as chimchae is integrated under the term kimchi while a new classification of kimchi is introduced to encompass a total of 47 dishes including 10 gimjangkimchi, 19 botongkimchi and 18 jangatji. Here, the number has been increased by 2.4 times from the 20 dishes in the 1918 edition. The great increase of jangatji is also noteworthy.



55_ As the author has yet to analyze all editions of 『*Joseonyorijebeop*』, the addition may have been made before the 1937 edition. This is a topic worth discussing in the future.

It seems that namul dishes based on nachaeryu have rapidly developed and kimchi dishes were widely expanded between the sixteen years from 1921 to 1937 when the 8th edition was published and such historical change forms the basis of namul and kimchi cuisine of the modern Korean society. Such dramatic change as discussed in 『Joseonsikmulgaeron』 seems to be a result of a modern academic approach to food ingredients which adapted to the climate and geography of the Korean Peninsula, diversified modern scientific botanical studies, crop cultivation experiments, nutritional analysis and modern study on food sciences conducted during the period of Japanese colonial rule in addition to the development of heat processing technology using coal and gas and the development of various cooking tools.

Table 16. Changes in various editions of 『Joseonyorijebeop』

	List of namul dishes	List of chimchae dishes	List of jjjim/ muchim dishes
『Mangapilbi Joseon yorijebeop』, 2nd edition, 1918	<ul style="list-style-type: none"> • Namul recipes Eggplant, Osmunda japonica, bracken, white radish, raw white radish, water parsley, mung bean sprout, crown daisy, dried radish greens, cucumber, japchae⁵⁶, bean sprout, young vegetable, squash, bamboo shoot, Cucumis melo var. conomon fruit (17 dishes) 	<ul style="list-style-type: none"> • Chimchae recipes Nabakgimchi, dongchimi, dongchimibyeolbeop, baechaegimchi, syeokbakji, oegimchi, oejji, oeshogimchi, oechanguk, jyangkimchi, jjanji, jangjjanji⁵⁷, jyeotgukji, tonggimchi⁵⁸, jyeonbokgimchi, dakgimchi, kkakdugi, gochyonipjyangatji⁵⁹, maneulsheon, mujiyangatji (20 dishes) 	<ul style="list-style-type: none"> • Jjjimi (pan-fried dishes) recipes White radish, pollack, flatheadmullet, ugeoji(outer leaves), cucumber (5 dishes) • Muchim(seasoned vegetable) recipes Laver, prawn, sea mustard, pollack (4 dishes)
『Mangapilbi Joseon yorijebeop』, 1921 edition	<ul style="list-style-type: none"> • Namul recipes Eggplant, Osmunda japonica, bracken, raw bracken, white radish, raw white radish, water parsley, mung bean sprout, crown daisy, dried radish greens, cucumber, japchae, bean sprout, young vegetable, squash, bamboo shoot, Cucumis melo var. conomon fruit (17 dishes) 	<ul style="list-style-type: none"> • Chimchae recipes Nabakgimchi, dongchimi, dongchimibyeolbeop, baechaegimchi, syeokbakji, oejji, Yonoinoeji, oeshogimchi, oechanguk, jyangkimchi, jjanji, jangjjanji, jyeotgukji, tonggimchi, jyeonbokgimchi, dakgimchi, kakdugi, gochyonipjyangatji, maneulsheon), mujiyangatji (21 dishes) 	<ul style="list-style-type: none"> • Jjjimi(pan-fried dishes) recipes White radish, pollack, flathead mullet, ugeoji(outer leaves), cucumber(5 dishes) • Muchim(seasoned vegetable) recipes Laver, prawn, sea mustard, pollack (4 dishes)

	List of namul dishes	List of chimchae dishes	List of jjjim/ muchim dishes
『Jubuui Dongmu Irilhwalllyong Joseonyori jebeop』, supplement 8th edition, 1937	<p>Chap. 23. Namul(二三) Eggplant, Osmunda japonica, bracken, white radish, water parsley, mung bean sprout, crown daisy, bean sprout, Artemisia vulgaris var. vulgarissima, young vegetable, dried radish greens, squash, cucumber, bamboo shoot, Cucumis melo var. conomon fruit, white-flowered gourd, rough asterAralia elata sprout, scallion, mushroom, Aralia elata sprout, chili leaf, skewr, japchae (23 dishes)</p> <p>Chap. 24. Saengchae (raw vegetable)(二四) White radish, bracken, cucumber, mustard leaf, mung bean sprout, tangpyeongchae (6 dishes)</p>	<p>Chap. 13 Kimchi(十三.-) Tonggimchi, how to make kimchi stuffing, seokbakji, jeotgukji, ssamginchi, jjanji, dongchimi, kkakdugi, jireomgimchi, chaegimchi (10 dishes)</p> <p>Chap. 24. Kimchi(十四.二) Putgimchi, nabaekgimchi, janggimchi, oegimchi, oesogimchi,oeji, kkakdugi, oekkakdugi, gulkkakdugi, sukkkakdugi, dakkkakdugi, gatkkakdugi, bakgimchi, gonjangeotgimchi, jeonbukgimchi, gulgimchi, dolnamulgimchi, yeolmugimchi, mejeot⁶⁰ (19 dishes)</p> <p>Chap 24. Cold soup(十五.) Cucumber, sea mustard, laver(3 dishes)</p> <p>Chap 16 Jangatji (十六.) White radish, abalone, taro, yong radish, dried radish, scallion, sweet potato, chili leaf, mussel,green chili, cucumber, vegetable, tofu, wild chive, water parsley, butterbur, sweet potato 二 garlic (18 dishes)</p>	<p>Chap. 19 Jijimi (pan-fried dishes) recipes(十九.) White radish, ugeoji (outer leaves), cucumber, white radish, squash, croaker (6 dishes)</p> <p>Chap.22. Muchim (seasoned vegetable) recipes(二二.) Pollack, sea mustard, laver, prawn, kimch, cucumber, pickled radish</p>

■

56_ Written as ‘집치 ’ in the original text.

57_ Written as ‘장완지’ in the original text.

58_ Written as ‘김통지’ in the original text.

59_ Written as ‘고초넙장앗지’ in the original text.

60_ It says in the original text that metjeot produced in Gyeongsang-do is famous for its great taste.

4. Conclusion

So far, the classification and the scope of vegetables in traditional botany was studied with focus on nachaeryu plants that developed by adapting to Korea's geographical conditions and based on the findings, the evolution of namul dishes based on nachaeryu and kimchi dishes was observed. Simply put, the expanded scope of kimchi dishes first made with naryu including eggplants and cucumbers collectively classified as chimjeochae into kimchi made with leaf vegetables such as mustard leaf and cabbage hints the importance of review on nachaeryu.

The author following an endeavor to pioneer historical astronomy has recently paid attention to the flora of the Korean Peninsula and ecological life as a study topic, reviewed various materials for the last few years which led to a study on the historical texts on Korean Peninsula's climate, on learning and classifying traditional knowledge on plants and on an ecological folklore approach to our customs that have adapted to severe cold and heat. In that context, the author became interest in the ecology of food, which has further developed in the course of guiding the doctorate paper of Dr. Park Chae-lin titled 『Root of Jeseon Dynasty Kimchi』(Minsokwon, 2013) while the author's having majored in biology as an undergraduate school also bestowed a natural interest in the botanical classification of the traditional times.

Although the study might have raised questions that are difficult verify and made misdirected arguments due to ignorance in food sciences, the author hopes that it contributes to the study of the flora of the Korean Peninsula and ecological natural studies and that readers takes into account the difficulties and significance of interdisciplinary study.

Given that the classification of nachaeryu, a term unfamiliar to us, was an important terminology in the traditional times, it is worthwhile to review the traditional wisdom and transmission of knowledge from a different perspective while tracking the origin of the related term namul

is all the more significant. As the native Korean names of plants were preserved in texts since 『*Hyangyakjipseongbang*』 and their names have been passed down or evolved throughout the times, a systematic analysis on this is also a task that the academic circle must assume.

In addition, the author hopes that a more detailed analysis of the plant classification system found in traditional texts will take place and lead to a discussion on classification of food. To that end, the academic circle of our time must play a role in further developing on the study of traditional texts on medicinal herbs, agriculture and food and traditional encyclopedias.

In that sense, the paper drew attention to the perception on nachaeryu plants in the traditional times and the expansion of nachaeryu dishes in order to establish and promote the academic study on kimchi, which has emerged as a national issue of late, which is an attempt to inherit the ecological lifestyle of adapting to the climate, geography and flora of the Korean Peninsula as well as a modern interpretation of such lifestyle.

Korean Food Culture and the Making of Winter Kimchi, Kimjang

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1. Introduction – Food Culture and Structure

Food is essential to human life. There is no area of commerce or research that is not related to or affected by food; the economy, politics, the arts, religion, and others. This presentation will clarify a way of living and a symbolism system with regard to ‘food culture’. Different from economics and politics, food culture has longevity. According to Braudel,¹ ‘longevity’ with reference to food culture refers to the long-term survival of certain food choices in our everyday living. The longevity of food culture is bound to have a pattern or structure constituting the culture and having it continue. This presentation will explore how certain foods, present and future, have longevity and become part of a cultural identity.



1_ Braudel Fernand, translated by GC Ju, 『Civilization and Capitalism – A structure of everyday living』, Ggachi, 1997, pp 463~ 471.

Is it possible to connect food and cultural identity? This question has been an important topic for cultural researchers for a very long time. However, with the emergence of the cultural process theory and the creation theory, the importance of food on culture has been forgotten among cultural researchers. Some critical scholars argue a cultural structure imposes restraints, therefore more emphasis should be given to the creation of a new culture, which will lead to a new future. They say a unified cultural structure makes individuals prisoners, and is weakening their freewill and action. This is not necessarily true. This paper does not believe that only the freewill doctrine- based microscopic approach to culture will lead us to a better future. The microscopic approach has avoided explanations on the existing structure, and gives a distorted picture as to the relations between the whole society and its individuals, in respect to the culture's ideology and economy, culture and economy, everyday living and non-everyday life. The approach has assumed people and their culture take a subordinate understanding of society and the motives behind people's actions. My understanding is that there exists a long-standing structure in a specific culture's folk lore and traditions. Knowing about these structures will help researchers understand the relationships between a culture's folk traditions and society, and how the people live their lives.² It is certain that a thorough academic analysis of the structure, and explaining a specific subject within the structure is not easy. On the other hand, it is neither logical nor realistic to say that there is no sustaining and solid relationship among the longevity cultural elements. There is a presumed existence that transcends beyond the infinite possibilities of individual entities. Various symbolic systems do continue for example languages that are transcending beyond the realm of individuals.

2_ Onuki Emiko, who has studied the symbolic meaning of rice in Japanese culture, also presupposes the existence of a thousand -years- lasting structure. Onukim Emiko, translated by DS Park,

『Anthropology of Rice』, Sowha, 2001, pp 22~25.

Food culture is a long lasting culture structure. Food is closely related to the economy, ecology, geography, politics, and history that surrounds a group of people and affects their behaviors and actions. It is an important element with a governing power over everyone's everyday life. Edmund Leach said there are two approaches to the understanding of this structure.³ First is logical approach, the other experimental approach.

The logical approach represented by Claude Levi-Strauss analyzes a cultural structure from an ideological perspective. It says there is an ideological structure hidden in the relation of Kimchi, soup, and rice. After going through various modifications, these structure will come to the surface of reality. In other words, the logical approach aims at investigating the structure as it exists on a cognitive level or perhaps a symbolic level. For this reason, the logical approach is mostly interested in languages.

Levi-Strauss, a leading scholar of logical structuralism or ideological structuralism presupposes, there is an underlying pattern in thought, and it is universal and dichotomous. The dichotomous thought is expressed in various means, such as in mythology, clans, architecture, food, and others. The problem with the Levi-Strauss's logical structuralism is that it is presupposing thought patterns and has a prerequisite to action, which is extremely unitary and arbitrary. His theory explains a truth to an extent in saying that there is a structure in thoughts and the structure is relatively independent from social and economic reality.

The second structure, the universal structure, says cultural structures exist in the perception or thoughts of the neighboring world. This theory has been discarded in most academic studies, other than in linguistics, because it is hard to verify. While I accept his supposition of the existence of such universal structures, I do not believe it is useful in research. In addition, his theory of a universal structure in ideas is hard to connect to social structures. There is a danger that it would cut



3_ Edmund Leach, translated by BI Gu, 『Culture and Communications』, paranbook, 1991, pp 9~16.

off culture from society. While giving an emphasis on either culture or society is possible, which takes the precondition of acknowledging each one's autonomy, few can be obtained from separating the two fields.

Using an experimental dimension refers to what can be confirmed by the senses and our experiences in everyday life. We call it facts or reality. As social facts exist, so do cultural facts. In food culture, we find lasting elements and relationships among them, based on which forecast of a future is possible. Korean basic meals comprised of rice, soup, and Kimchi. This is a good example. Rice, soup, and Kimchi are significant constituting elements of the Korean food culture, and Koreans believe there is an established structural relationship among them. These fixed and lasting structures in Koreans everyday life and their thoughts is identified by experience.

I find that presuming a lasting structure in food culture, while reflecting on a way of life and symbolic system related to food is a rational assumption, not enough systematic research has been done on the subject. Researchers studying folk culture describe the long lasting folk customs in ambiguous terms like 'prototype' or 'original'. 'Prototype' or 'original' were used by Jung and Eliade, describing a concept of fundamental structure being repeated throughout history in a group of people's consciousness, which exists in the form of sub-consciousness or a priori intuition. While positively agreeing with the existence of the 'prototype' or 'original form', I still think 'structure' is a more appropriate concept in experimental folk culture studies.

Experimental structuralism theory believes in a basic premise, though it is not intentional, for most humanities and social science studies. It is a basic framework for logical explanations that social and cultural phenomena are comprised of various elements, which are connected to each other in a certain way called 'structure'. It is a necessary premise not only for academic theories, but also in understanding everyday life. People believe that the world is composed of various elements. These elements are connected to each other in a certain way, and there is a sustaining force keeping the structure. This is the knowledge they

gained through experiences.

Different from Levi-Strauss experimental structuralism, which presupposes a universal structure, I believe there exists various structures in differing forms in the subordinate levels of culture. While agreeing to 'a culture may have a structure', it is not easy to identify it. I believe various structures may exist in different forms and with different contents, less than one structure. This assumption opens lower level experience-based discussions to a structure. For example, food culture or mythology may have a structure in them. This presentation will look into this structure through the traditions and concepts of Kimchi. It is important to understand that Kimchi has other elements based on the preposition that food culture is an independent area. Thus, Levi-Strauss theory that there is a presupposing existence of a structure in culture holds true, but has a weakness in that it does not discuss the underlining structure of a food culture.

The presupposed structure can be divided into two categories; ideal structure and basic structure. The ideal structure is what society members always want to have ready, but basic structure is a structure that is readily found in everyday life. As ideal structure is presented through basic structure, the existence of the basic structure is a precondition for an ideal structure. Here, the ideal structure is not a conceptual analysis model, but a reality existing in folk culture or in people's everyday living. A basic structure as well is the one being observed in people's everyday life, existing in the thoughts of the people.

2. The Structure of the Korean Food Culture

Research on Korean food culture has made significant progress in terms of compilation and classification of references, analysis on historical changes, and others. Not enough effort, however, has been made on historical analysis from the perspective of symbolism of food, food, and social structure, nor on the analysis on the structure of food culture. It was because the studies on food were mostly from the perspectives of natural science, chemistry, or agriculture. Food studies from the viewpoint of folklore and anthropology began as late as in the 1980s.⁴

The Korean food culture is based in the geographical environment of the Korean peninsula, their history, and social relations. Food is a means to show off one's prestige and social status. Having a structural strength in itself, the Korean food culture continues despite numerous social changes over time. Kimchi and Kimjang, the topic of this presentation are examples of the structural strength.⁵

Food culture can be approached from various perspectives, German food folklorist Bunter Wiegelmann's is one of them⁶. He suggested four important items for food culture studies; cooking, taste, table manners, and the rhythm of meals. My opinion is types of food dishes should also be added to food studies.



4_ A lot of research has been done on food from the perspective of food science and human nutrition, and it is hard to enumerate them. Ju Young-ha is a leading food folklorist. His studies on Kimchi mark the beginning of Kimchi studies. He has published several books on Korean foods. 『Kimchi, Korean food』 1994, Space; 『food war, cultural war』, 2000, Four seasons; 『food in the picture, food history』, 2005, four seasons, of the recent studies on Kimchi, Park Chae-rin's is outstanding.

『Roots of Joseon Dynasty Kimchi』, 2013, Minsokwon.

5_ Of the continuation of Kimchi and Kimjang culture amid modernization, refer to my article 「modernization and the continuation of Kimjang culture」, 『Humanistic Understanding of Kimchi and Kimjang culture』, World Institute of Kimchi, 2013, pp 189~ 215.

6_ Wiegelmann, Gunter, *alltags-und Festspeisen in Mitteleuropa*, 2006, p 16. Gunter's research marks an important watershed in the food, folk culture studies. He focused on social spatial distribution and changes and renovation process of food and folk culture rather than the structure of food culture. He did researches on coffee and potato, their historical and social consumption process.

German folklorist Ulrich Tolksdorf is another important scholar, who contributed to the food culture structure in research. He focused on types of foods, recipes, and table setting.⁷ Tolksdorf thought combining social value to food studies important and paid attention to connecting points of the food culture structure and social structure.

My research focuses on the arrangement of foods and tastes rather than cooking, which would be equivalent to Wiegelmann's dining table arrangement and eating rhythm. Many food specialists agree that rice, soup, and Kimchi comprise the basic structure of a Korean meal. Rice has been a staple food, since the Bronze Era, and the various side dishes accompanying the rice have made up the basic structure of Korean food culture. In contrast to the westerners practice of eating bread made with salt in it, boiled rice is without salt. Plain boiled rice needs side dishes with salt, which is necessary for life. Various kinds of Kimchi, pickled and fermented vegetables, were the main side dishes providing salt for Koreans.

1) Rice without salt⁸

Boiled rice is the most important food in Korean food culture. No one would question it. Different from westerners' bread, salt is not used to make boiled rice, and the plain tasting saltless rice is a key factor constituting the structure of the Korean foods. My assumption about the saltless boiled rice is that it was an offering to gods.⁹

Boiled rice had not been a staple food for as long period as most people would think. It was only in recent history, when the kettle to cook rice was developed. It is now a known fact that porridge and ddeok (rice cake) used to have a corresponding position to rice among Korean food choices.



7_ Toksdorf, Ulrich, "Nahrungsforschung", in: Rolf Brednich (hg), *Grunriß der Volkskunde*, 2001, Berlin, pp239~254.

8_ SH Kim et. al., 『Cultural Understanding of Dietary Life』, Singwang Publishing Co., 1998, pp 147~154.

9_ In the Korean ceremonies and rituals, ddeok (rice cake) which is made with salt in it, was more important offering than rice. Further discussions are believed needed on this topic.

Judging from the iron kettles excavated from the old tombs of the Three Kingdoms period, it is believed that boiled rice became a staple food around the Three Kingdoms period. Even though boiled rice requires less work than making porridge, it does not seem that boiled rice was everyone's everyday food. Only the upper class could afford rice and ordinary people's main food was a multi-grain rice.

Prior to boiled rice, a multi-grain porridge was the main food for Koreans. Beside grains, vegetables, meat, or fish are believed to have been used as additions to make various porridges. It is said that during the Joseon Kingdom, porridge was breakfast for most people. However, there were other types of rice dishes after porridge, such as jjinbap or 'jie bap' (steamed rice). The steamed rice appeared after the 'siru' (steamer) was developed. The steamed rice was the main food for upper class people, it was also an offering at rituals for the gods of heaven on the rites table as a whole in a steamer.¹⁰ Thanks to the invention of the mortar, ddeok (rice cake) emerged as an important item in the Korean food culture. While boiled rice was became an everyday food staple, ddeok became an important item for rituals.¹¹

2) Guk (soup) and Jjigae (stew)

Guk or soup is an essential item to the Korean meal. There are various Chinese characters referring to different types of soup, which is 'guk' in Korean. Three of the most often used Chinese characters for soup are gaeng (羹), hawk(臠), and tang(湯). Gaeng is a meat and vegetable soup, hawk is a soup with meat, but without vegetables, tang is an honorific term for soup. This new classification of soup is believed to have been introduced to Korea along with Confucianism. Jjigae is a stew, which has more solid ingredients and less liquid than guk. Guk is served separately to individuals, but jjigae is often shared from one bowl. Soups are also divided into two basic kinds, clean soup and turbid soup. Light

10_ SB Kim, 『Table setting』, Giparang, 2010, p42.

11_ While ddeok (rice cake) is more important for shaman exorcism, rice is important in Confucian ancestral ritual, which suggests rice cake is older ritual food than rice.

soy sauce soup and cold soups are examples of clean soups, other than these, most are turbid soups. Cheonggukjang Jjigae(rich soybean paste stew) and doengjang jjigae(soybean paste stew) are the two most famous soybean paste stews or jjigaes.

The primary purpose of soup is to have people eat meat. Korean guk is believed to have been influenced by Chinese and Mongolian soups. Chinese gaeng(羹) and Mongolian Dotramahaare soups made from lamb intestines.¹² For example, in Mongolia and Tuwa(a Russian Republic, south of Siberia), people put salt in their soup when they boil meat. Koreans do the same.

Whether or not soup comprises the basic structure of the Korean meals regardless of its social status has some room for further thought. Not everyone could afford soup with meat and fish in it, so it is believed rice and Kimchi became the basic menu for most Koreans. In an infamous old Korean story, when Chunhyang's boyfriend Lee Mong-ryong came to her house as a beggar in disguise, He was treated to a simple menu of rice, soup, and soy sauce.¹³ It should be mentioned that this was not a soup with meat or fish in it, but a soup with a little bit of anchovy. This type of soup was only for the upper class. Considering this, it can be said that the basic food structure of Korea is rice and Kimchi, but the food structure with soup included came into during the late Joseon Kingdom.

3) Korean Soy Sauce

The Jang is a term referring to soy sauce, soybean paste, red pepper paste, or rich soybean paste. They are the basic ingredients to make various Korean foods and they are also important items in the table setting along with rice and soup. The first bean-based sauce is hae(蟹), which is mentioned in Chinese literature 『Jurye』 published in the

12_ HG Seo, HJ Lee, DI Yun, 『Mongolian Food Culture』, 『Comparative Folklore Studies』 Vol.19, Comparative Folklore Study Association, 2000, p255.

13_ HS Choi, 『Korean Food Culture and Dietary Life』, Hyoil, 2002, p51.

3rd century B.C. Hae(醢) is made with dried meat (bird, animal, fish) powder that is put in an alcoholic beverage, mixed with millet malt and salt, then put in a jar sealed tight. Lastly, it is kept for 100 days in a dark place for fermentation.¹⁴

Korean Jang uses different ingredients than the Chinese's version. It is made of beans. Manchuria is said to be the origin of the bean. It is believed that the ancient Koreans living there made Jang with beans. In Chinese literature, 『*Samgukji*』 〈*wiji dongijeon*〉 says that the people of Goguryo were good at making fermented foods”. This is an evidence for the assumption. There is also an ancient Goguryo mural, Anak No. 3, in Hwanghae-do province, which also has a jar by the well and is presumed to have fermented foods in it.¹⁵

Historical literature of the Goguryo and Balhae eras, which were parts of Manchuria and of Silla, also wrote of fermented soybean lumps, soy sauce, and soybean pastes. 『*Samguksagi*』 has it that “King Sinmun in his third year (683) sent 135 carts of rice, alcoholic beverage, oil honey soy sauce, fermented soybean lump cloth as wedding presents to Kim Heum-wun to have his daughter as his wife.” An interesting point is that soy sauce and fermented soybean lumps were the wedding gift items. There is a record saying that during the Goryeo Kingdom period, rice, salt, and jang were distributed as emergency foods, and soy sauce was a food used as part of religious rites. The above records are believed to be telling evidence that by the Three Kingdoms period, jang(soy sauce and soybean pastes) became a core element of Korean food and by the Goryeo Kingdom period, it became a fixed element of the basic Korean food table setting.¹⁶

More elaborate explanations on soy sauce and bean pastes are found during the Joseon period's literature. It is said the royal court's jang recipe and the ordinary people's jang were different. The Royal court

14_ SJ Yun, 『Fermented Preserved Foods of Korea』, Singwang, 2003, p43.

15_ SJ Yun, *ibid*, p43.

16_ SJ Yun, *ibid*. pp43~ 44.

used bean soup to make fermented soybean lump and made soy sauce with the limp. Hong Man-seon's 『*Sallimgyeongje*』 published in 1715 introduces 45 kinds of soy sauce and bean paste recipes, suggesting that by then various kinds of Jangs were made and widely used regardless of social status or region.¹⁷

『*Jeongbosallimgyeongje*』 by Yu Jung-im in 1766 also introduces various soy sauce and bean paste recipes. It says the use of soy sauce is what decides the tastes of all side dishes, so making soy sauce is one of the most important jobs for gentlemen, and introduces soy sauce recipes, which tells the importance of soy sauce in the Korean food culture. The importance of soy sauce, rice, and soup is well described in the 『*Gyuhapchongseo*』 written by Bingheogak Lee, wife of Seo Yubon cir. 1815, “Eat rice like spring, eat soup like summer, eat soy sauce and bean pastes like autumn, drink alcoholic beverage like winter.”¹⁸

It is certain that Jang is a fermented Korean food, and it is part of the basic table setting. The question is whether to include it as a core item of the Korean table setting. While it is a side dish providing saltiness to accompany rice, as it is also used as a condiment for other various foods, it is believed fine to exclude it from the basic table-setting item.

4) Kimchi

Kimchi is believed to have become important in Korean meals far before it was first mentioned in old books. As a fermented food, Kimchi is an original Korean food, but it is different from the Chinese vinegar pickled jeo(菹). It is hard to trace back to when it began, however, it would not be wrong to say it was during the late Joseon period that Kimchi began to be included in the basic structure of the Korea food culture.¹⁹ According to a poem by Gwon Pil(Joseon poet, 1569~1612), Kimchi and rice were the basic foods for poor scholar-officials. Gwon

17_ SJ Yun, *ibid*, p44.

18_ SJ Yun, *ibid*, p45.

19_ CL Park, 『History, Significance, Development of the Korean Kimjang Culture』,

『Humanistic Understanding of Kimchi and Kimjang Culture』, World Institute of Kimchi, 2013, p56.

Pil²⁰ did not feel sorry for not having meat or fish side dishes, He wrote Kimchi was enough for a scholar.

Kimchi was called the half-staple food, and was considered the side dish that should be ready at all times. There might be rich-poor differences, however it was a must side dish for all households.²¹ Kimchi was an everyday food, ritual food for Confucian rituals, a must side dish at the royal palaces, as well as a side dish for the poorest mud hut dwellers. In this regard, it can be said that Kimchi had been a core item comprising the basic structure of the Korean food culture.

According to Jo Suk-jeong, who did research on Jeonju(North Jeolla province) people's understanding of Kimchi, today's Koreans add one more element to the definition of salt pickled foods. She wrote that in the minds of the Korean people today, the previous definition of Kimchi as being a salty pickled fermented vegetable has been expanded to include the Kimchi condiments of garlic, red pepper, fish sauce, ginger and others.²² She said Kimchi is considered completely different from the salty pickles of jangajji. Such an understanding of Kimchi is believed to have been emerged after the mid 20th century when a plentiful supply of red pepper and garlic became possible. She made a clear Kimchi, which is not a simple pickle, but a fermented food made of Napa cabbage, salt, and various other ingredients and condiments.

5) Table Manners, the structure of food culture

Table manners or the serving order of food in respective regions offers a clue to understanding the structure of a food culture. Korean foods are served all at once.²³ The reception table presented to the guest of honor is a good example. A lot of foods, beautiful and colorful are put on a table all together. In some royal banquets, food was- served one-



20_ GwonPil (pen name 'seokju'), a Joseon period scholar- official who lived between late 16c and early 17c. He left 『Seokjujip』(collection of seokju). CL Park, ibid. p56.

21_ WU Seo, 『Nutrition of KoreanKimchi, 『Sinsidae』 ('new era') vol 4. No. 3, 1955, p90.

22_ SJ Jo, 『Kimchi and Cultural Knowledge』, 『Korea Cultural Anthropology』 vol 40, No.1, 2007, pp83~127.

23_ 'Korean food structure differs from region to region' is an assumed premise of my study.

by-one in the order of first course, second course, third course, fourth course, and fifth course,²⁴ it is an exceptional case in the Korean food culture.

As mentioned above, rice and side dishes comprise an ideal food structure of the Korean table setting. The very basic items are boiled rice, soup made of vegetable or meat, and fermented vegetable like Kimchi, which constitutes the structure of an ideal food culture. Rice is a symbol of Korean food, a metonymy, and a metaphor for Koreans, so is Kimchi and soup especially a beef soup.

Rice, beef soup, and Kimchi are the constituting elements of the ideal structure of the Korean meal, and the composition was practiced in all the food cultures of Korea regardless of social status. Rice, soup, and Kimchi all together at the same time in the mouth are the tastes of Korea.

3. Social and Historical observations of food culture structures

To explain the structure of food culture for a country like Korea, who has long history and several traditions, complex social structures, and regional differences is not an easy job. It is particularly so in a country where there were differences in food culture respective of social classes. The Confucian food culture established in the late Joseon Kingdom era represents the structure of the Korean food culture of all classes.

German folklorist Gunter Viegelmann studied the regional and social dissipation routes of coffee and potatoes, and divided the food culture into everyday living food culture and ritual food culture.²⁵ Which of

24_ SB Kim, 『Table Setting』, Giparang, 2010, p130. Explaining the basic table setting, Kim Sang-bo gave the example of this serving.

25_ Gunter Viegelmann, *ibid*, 2006.

the two is more important depends on varying contexts, however, most food culture researchers focused more on ritual and festival foods.

In this chapter, I would like to point out that the basic Korean food structure that includes Kimchi is found not only in ritual foods that reflect a group's identity, but in everyday life foods. This structure applies to foods for all Korean people regardless of social status whether they are from the royal palace or from the lowest class of people.

1) The structures of everyday food and ritual food

It was previously mentioned that the basic staple of Korean food is rice, and an ideal structure rice, soup, and Kimchi. This chapter will discuss how rice-soup-Kimchi, became an ideal structure even in Confucian rituals.

During the Joseon Kingdom period, religious rituals could be divided into two main categories: Confucian rituals and shamanism rituals. In contrast from the Confucian rituals, Kimchi is not included in the shamanism rituals. For example, rice is served on the ancestral worship ritual table at the end of the shamanism ritual table, but not Kimchi.²⁶

The fact that Kimchi is not served on shamanism ritual tables seems to have a lot to do with the garlic smell and red pepper color, which is believed to chase away spirits, but basically it is believed that it is a reflection of the differences between Confucian rituals and shamanism rituals.

In Confucianism, which was a prevailing religion over shamanism during the Joseon period, rice and soup were placed in the center of the ancestral worship table together with Kimchi, usually fresh Kimchi. However, Kimchi was not served on the wedding table or Big Table celebrating special anniversaries such as the 60th birthday, 70th birthday, 60th wedding anniversary, or others.

26_ SH Lee, 『The Understanding of Gods reflected on the Ritual Table』, MA dissertation, Seoul National University, 2006, p68; JA Choi, 『A Study on Material Culture of Shamanism』, Doctoral dissertation, The Academy of Korean Studies, 2008, pp232~239.

Korean traditional food is divided into four categories: religious ritual foods, seasonal ritual foods, festive foods, and everyday foods. Kimchi is included in all of the Confucian ritual foods, party foods and everyday foods. However, it is not included in Shamanism's ritual foods and seasonal rituals foods. This suggests Kimchi's status grew with the growth of Confucianism as a national religion. Various books on the customs and formalities of ancestral rituals, such as 『*Jeungbo Saryepyeollam*』 ('enlarged handbook on four rituals', by Hwang Pil-su, 1900) and 『*Gwangryelam*』 ('comprehensive book on rituals') show rice, soup, and Kimchi were the most used items of the ritual foods.²⁷ According to Park Chae-rin, it was in the 18th century, when Kimchi gained official status as the Confucian food at national ceremonies.²⁸ By late 18th century, rice, soup, and Kimchi became an ideal structure of food culture in the Confucian rituals and everyday life though not in shamanism and seasonal rituals.

As previously pointed out, the core factor that decides the structure of Korean food culture is that no salt is used in making boiled rice. Salt less rice is common in the culture where rice is a staple food. If salt were used, rice alone without side dishes would make a one-dish-meal. In that case, the basic structure of rice and Kimchi or the ideal structure of rice, soup, and Kimchi would be meaningless.

2) Table Settings during Joseon Kingdom with the class system

Let us first review the foods at the royal court, the highest class of citizens during the Joseon Dynasty. In the 18th century, a royal meal for a king of Jeongjo included rice, soup, and Kimchi. Kimchi was also served with his porridge meal, which considering it is a king's meal it represents as a court cuisine, and suggests Kimchi together with rice and soup comprised the basic structure of the court cuisine. As Kim Sang-bo wrote in his book, rice, soup, and Kimchi were served in the



27_ The Academy of Korean Studies, 『Joseon Kingdom Ceremonies: coming-of-age, wedding, funeral, ancestral』 worship(V) - Ancestral Worship, 2000.

28_ CL Park, 『Roots of Joseon Dynasty Kimchi』, 2013, p169.

court cuisine both as everyday foods and as festive foods.²⁹

Court officials sat at either a one-person table or table of for two or more with dishes served mostly composed of rice, soup, Kimchi, plus one side dish. The lower ranking officials were given only rice and soup. From the two cases, it can be presumed scholar officials ate rice-soup-Kimchi. Warehouse keepers, masons, blacksmiths, village heads, and brick makers were given a simple meal of rice and soup without Kimchi when they worked at the royal court. By Joseon period, a meal composed of rice, soup, and Kimchi was the ideal food structure for farmers. Of the three items, soup could be missed for seasonal reasons or when poor families could not afford it. Boiled rice or multi-grain porridge accompanied by the second most important item Kimchi as a source of saltiness was the basic food structure. When a soup is added, the meal has an ideal structure.

During the Japanese colonization period, a survey was done on the dietary life of the Koreans in Seoul and Ulsan. Lower class farmers and lower class mud hut dwellers often could not afford soup for their meals. In 1936, the relatively rich farmers in Ulsan had soybean paste soup for breakfast, lunch, and dinner, but middle or lower class famers could not afford soup.³⁰ According to the study on Seoul mud hut dwellers in 1940, soup and Kimchi were included in the meals of some of those who were better-off, but meals for the poor were rice, Kimchi, and soy sauce.³¹



29_ SB Kim, *ibid*, pp96~ 107.

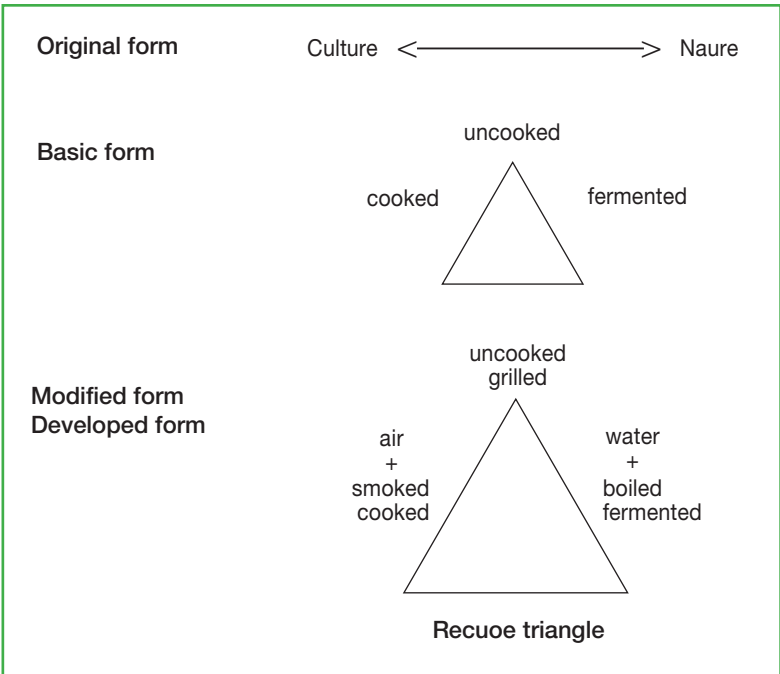
30_ Korean Agricultural Society Sanitary Study Council, translated by GT Im, 『Agricultural Village Sanitation of Korea』, National Folk Museum, 1939 (2008).

31_ Keijo Imperial University Sanitation Survey Council, translated by HS Park, 『Mud hut Dwellers' Life and Sanitation』, Minsokwon, 1941(2010), pp198~203.

4. Continuation of the food structure and Kimchi/ Kimjang culture today

It has been reviewed that rice, soup, and Kimchi comprise an ideal structure of the Korean meal, and that except for some shamanism and seasonal rituals the structure applied to most of Korea's food culture. In addition, it is found that even without side dishes rice and Kimchi constituted the basic structure.

As discussed in the early part of this presentation, Levi-Strauss, the leading exponent of the structuralism theory, also commented on foods and explained it in the famous triangle food diagram based on cooking methods. Having fire as a deciding factor, he drew a triangle with the cooked foods and the uncooked foods on opposing ends and fermented food as a medium-term. According to the diagram, Kimchi belongs to the category of the rotten or the fermented.



The diagram³² above is a modified version of the conclusion of Levi-Strauss' book 『Mythologiques』 Vol. III. He divided fermented foods into two kinds, mucid slow rotten and decayed or rotten.³³ Fermentation is equivalent to a mucid slow rotten food. Levi-Strauss thought the contrast between culture and nature was equal to the contrast between the cooked and the rotten, and the rotten in contrast with the uncooked. It again is the converse of boiled or smoked. Rotten as it involves water, is contrasted with the boiled. Such contrast is related to a universal dichotomous thought of human beings. Seeing the food structure from his universal structuralism, rice, soup, and Kimchi fall on the lower right end of his triangle. It suggests, they are close-to-nature foods, which is in sharp contrast with those of the western world, where grilled foods are comparatively large in number.

In view of Levi-Strauss category for senses, rice is odorless, Kimchi has a smell, rice is white, Kimchi red. If meat soup is added, the soup's smell is close to that of boiled rice and in terms of color, it is close to Kimchi. As for sound, Kimchi's crunchy sound is different from eating rice or soup. In general, Korean foods do not have a strong flavor, which is considered a main characteristic of the Korean food culture. According to Levi-Strauss, Korean food does not have a deep structure. As I wanted to find out the structure that can be experienced, I am not going to relate the food structure to epistemology or subconscious. The structure of the Korean food that has been developed over a long period of history has a triangle of rice, soup, and Kimchi at each point. If any of the three is missing, an ideal structure would collapse.

Kimchi belongs to a food structure that applies to all classes and status, and has continued for several hundred years. It is what has contributed to the longevity of Kimchi and Kimjang culture, which has survived political and economic modernization and social structure

32_ Alan Barnard, 『History and Theory in Anthropology』, Hangilsa, 2003, p236; Levi-Strauss, Claude, The Origin of the Table Manners, 1978, New York, pp471~495.

33_ Levi-Strauss, 『Mythologiques』 vol.1, 2005, Hangilsa, p608.

changes. This food culture structure has contributed to making Kimchi a representative food of Korea despite an elite group of people, who led Korea into westernization once branded Kimchi as a detestable smelly, old-fashioned, unfit food for official functions, and a symbol of poverty and shame.

The core staple of Korean food is rice. As long as boiled rice remains a central part of Korean food culture, Kimchi will continue to be a core element, and Kimjang, or winter-Kimchi making will continue.

When an extended family system was still going strong, the family's labor was enough to do Kimjang, and it was a family/community event that continued for days. Then, when urbanization began, Kimjang continued to be an important community event, where neighbors were expected to participate. However, with the increase in single (one-person) households, the community has begun to disappear, and continued to decrease the number of family members, it is certain that the practice of Kimjang will change.

With less numbers of participants and less numbers of cabbages, it seems to be an almost certain future of decline for Kimjang. To do Kimjang through communal sharing of labor is most likely to be reduced to a minimum, and winter Kimchi making will be by family members or with the help of relatives would replace it. The industry for developing Kimchi combined with a wider distribution of Kimchi fridges are expected to encourage more people to buy Kimchi rather than making it themselves at home.

Kimjang, however, is not going to disappear. The communal benefits, such as the deep unique tastes of Kimjang Kimchi, the memories of Kimjang making with family members and neighbors will keep Koreans attached to Kimjang culture for years to come. However, if the currently disappearing community were to be revived in urban areas, the traditional Kimjang culture with community would also come back, and it is believed that this suggestion will also bring a brighter picture for future of Korea and the Kimjang community.

5. Continuation of Kimjang and Kimchi culture and the structure of the Korean food culture

Thus far, the ideal structure and basic structure of the Korean food culture have been reviewed. The ideal structure when it is faced with reality sometimes was reduced to a basic structure. It is believed in the 18th century, when Confucian rituals came to be practiced by all classes that the ideal structure was accommodated and settled into the Korean food culture.

This presentation could not give a full picture of how and through what course the basic structure went through or how the ideal structure developed. The two structures seem to have been developed at different periods. Detailed explanation on this point has been left undone due to the limitations of this presentation. Another imperfection is it is based on previous studies, no fieldwork findings have been reflected in it. This task is to be left for future studies.

I believe most cultures have structures at various levels. The structure is in the hierarchic orders of universal structure, national structure, and respective subordinate structures. In other words, pluralistic structures do exist through which we estimate historical changes and forecast a future.

In this presentation, I have not proposed an expressed structure or an in-depth structure for understanding and tracking a culture's structure. It is not because I do not believe in the existence of the in-depth structure but because it is difficult to empirically prove. One might say there are Korean ethos and logos in the backdrop of the structure of the Korean food culture. However as nothing is known of what structure they have or how they would be presented, this presentation did not touch on the in-depth structures Levi-Strauss, Jung, Freud, and Marx mentioned. Theoretically, an expressed structure over time turns into an in-depth structure, however what part of a food culture structure constitutes an in-depth structure, what are the expressed elements, and others are hard

to pinpoint. Various types of Kimchi, tastes, recipes, where and what kinds of Kimchi to put in a table arrangement, and the various types of Kimchi in view of social status nationwide would make important subjects for future discussions when empirical data is ready. A folk map with information on Kimchi nationwide would be another future task.

Rice without salt in it cannot make a complete one-dish meal. Kimchi supplements the weakness of boiled rice is the basic structure of the Korean food culture. Soup has been added to the basic structure after Korea was influenced by Confucianism. This structure will to continue as long as rice without salt continues to be the staple food for Koreans. In addition, a structured table arrangement reflecting the contrast of various elements, such as color, taste, smell and others will remain unchanged.

In Korean food culture, Kimjang is expected to continue for a long time. However, the reducing Korean population, fewer family members, loosened family and relative ties, have weakened neighbor community ties, and might undermine the Kimjang community traditions. Despite such modernization, I conclude that as long as the Korean food culture structure continues, Kimjang will continue adjusting to social changes. Kimjang in the future might be quite different from what it is today.

In conclusions, I would like to thank Professor Asakura Toshio, who has attended my presentation session as a discussant at the 2nd Kimchiology Symposium, November 26, 2014.

Development of Kimchi and Income Growth

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1. What will kimchi look like in a 100 years?

What would the Korean's dining table look like in the year 2114, a 100 years from today? There might not be changes as drastic as in the science fiction cartoons that tubes replaced meals. But one thing is certain that the Korean's eating habit then would be very different from what it is today.

Would rice still be a staple food for Koreans? Following food habit changes, increased awareness of health, income growth, low rice prices and others, rice would no longer be a staple food. By 2114, white rice would have become a food for prisoners, as beans used to be, and "Do you want to eat white rice?" would have replaced the previous slang "Do you want to eat bean- mixed rice?" so threatening 'You might be put to prison'. Maybe most people would prefer eating unpolished rice, boiled barley, rice with beans and other grains rather than white rice.

Contrary to the westernization that took place in the past, an opposite direction change named Orientalization might creep in, and westerners would be eating rice and kimchi? Why not! It would mean kimchi globalization has been achieved. Anyhow, it is very likely that kimchi in a 100 years will be very different from today's. Then what would kimchi be like a 100 years after?

In mid Joseon period, about 500 years ago, salt- pickled cucumber or cucumber kimchi was the main side dish for Korean's meal. This was followed by radish kimchi appearing 200 years later, and finally the introduction of whole cabbage kimchi. From cucumber to radish to napa cabbage, changes have occurred in the making of kimchi. In the next century, what types of kimchi will grace the Korean dining table. Will it still be napa cabbage kimchi?

Same ingredients but a different recipe food might be in the future picture of Korean's dining table. Cucumber pickle would be a good example. Most of the middle -aged Koreans who grew up in the north of the middle region ate salt-pickled cucumber, a perfect side dish for barley or multi-grain-mixed rice. But children today who eat pizza and spaghetti prefer sour sweet cucumber pickle. To say similar changes would happen to kimchi in the future wouldn't be a too wild an image. Vegetable pickle jeo(蓴) that is said the great Chinese philosopher Confucius ate with 'a wrinkled nose' The 5th Century BC was considered the era of the vinegar pickle. The so called 'moving kimchi' 600 years ago in early Joseon period - the name was given as someone was said to be moved to tears for its excellent taste - was a cucumber kimchi made with salted shrimp, different from today's salt-pickled cucumber. It is possible then, cucumber pickles a 100 years later would be not the one we now know.

It can be imagined that a similar change could happen to napa cabbage kimchi. Would people eat the current cabbage kimchi mixed with red pepper powder, fish sauce, and various condiments and fermented for some period or a fresh salad type kimchi then be popular? Pork belly consumption would be increased and the old deep- fermented cabbage kimchi(mugeunji) would become popular. As westerners become familiar with kimchi and kimchi salad, it has now become a globally enjoyed food.

It may sound a far-fetched stretch of imagination. The reason for this tautological repetition is to consider the future kimchi from various angles. Will kimchi change? How will it change to what type?

There are numerous complex elements that would bring changes to future kimchi, and it would be unreasonable to attempt to foresee the evolution of kimchi based on one or two factors. Anyhow let's try a very simplified forecast based on one precondition.

The one precondition is what changes will be made to kimchi if the current staple food of boiled rice is replaced by other grains?

Basically, kimchi is to eat the boiled rice. It is not a one-dish meal and naturally any changes in the staple food will influence kimchi.

The income growth following economic development brought tremendous changes to Koreans' dietary life. More changes are expected to occur to kimchi, both knowingly and unknowingly and in quantity and quality.

As we can imagine any changes in rice, the staple food for Koreans would affect kimchi. The kimchi Koreans eat today might be the result of the changes made to the staple food rice a 100 or 200 years ago.

The introduction of the current napa cabbage kimchi would be the result of the economic changes of the Joseon Kingdom. From the 18th to the early 20th centuries in particular. As kimchi is a main side dish, a close look into the changes in the staple food of rice would explain how the current cabbage kimchi had been developed. In other words, the evolutionary process of changes in kimchi needs to be reviewed not alone but in a broader context of economic development, income change, and changes in the staple food of rice.

It is necessary to observe that rice as a staple food has made kimchi an indispensable addition to the Korean diet. Will the same tradition occur in the future?

2. Why napa cabbage kimchi?

Kimchi is a must item for Korean's diet. Kimchi's significance for Koreans is huge to the point that it was called an almost-staple food. Even today, a meal without kimchi is hard to imagine. When Koreans eat boiled rice, it is automatic that they eat kimchi, and kimchi became a representative Korean food at home and abroad.

While it is said kimchi is a representative Korean food and there are numerous kinds of kimchis, to be exact, kimchi generally refers to the whole head napa cabbage kimchi with various ingredients and condiments mixed and put in between the cabbage leaves.

Why is it there existed limitless kinds of kimchi in ancient times and the tradition continues today. But it wasn't until the late 19th or early 20th centuries the introduction of napa cabbage became the representative kimchi. This resulted in other kimchis falling to the status a supplementary dish or delicacy.

Why? An answer to this question would provide a clue to forecasting what changes would happen to kimchi.

It is believed that it was as late as mid 18th century when the napa cabbage kimchi made its appearance in earnest. 『*Jeungbosallim gyeongje*』 published in 1766 introduces a kimchi recipe in the explanations on cabbage as follows:

Cabbage harvest is right after the first frost. Make kimchi with the cabbages, put them in jars and seal tightly. Open the jar early next spring, you will have crunch tasty kimchi in beautiful color. Addition of fish or meat makes tastier cabbage kimchi stew, dry shrimp is even better.¹

1_ 『增補山林經濟』卷八. “菰 沈菰法 菰經一霜即收如常法作淡菰藏甕封蓋埋地中令勿泄氣至明春發見即其色如新美亦清爽菰蒸加魚肉皆美而加乾蝦肉尤美.”

It was as late as the 19th century when full plump cabbage became available. The napa cabbage kimchi first appeared in the mid 18th century came to be the current full plump cabbage kimchi with a head. Park Chae-lin emphasized "... the 19th century Joseon is when the representative whole cabbage kimchi was made complete. In this regard, this period is worth special attention in the history of kimchi."²

The history of the representative whole cabbage kimchi is as short as 100 years or less than 250 years at the longest. Why during this particular period had the cabbage kimchi been developed intensely? Around that period, superior species cabbage was introduced to Korea and seed improvement was vigorously pursued. It, however, does not provide enough explanation as to why the cabbage kimchi became a representative kimchi over the kimchis made of other ingredients when cabbage development period was only about 100 years.

Koreans had been eating various kimchis from far prior to the appearance of cabbage kimchi. As people's eating habit wouldn't change easily, radish, cucumber, and garlic chive kimchi made from ancient times would have become a representative kimchi.

For example, according to historical records, radish kimchi is the oldest kimchi. Kyu-bo Lee (1168~ 1241) of Goryeo period in his 『*Gapoyukyeong*』('poems of six plants from vegetable garden') which is included in the 『*DonggukYiSanggukjip*』 wrote poems of cucumber, eggplant, turnip, green onion, curled mallow and gourd and said kimchi was made with turnips.

When accompanied by soybean sauce or soybean paste, it is good to have in summer.

Salt pickled, it can last over the winter

When the roots develop underground

Best to cut them with sharp knife.



2_ CL Park , 『Roots of Joseon Dynasty Kimchi』, Minsokwon, 2013, p219.

Given the turnip kimchi similar to today's water kimchi(dongchimi) was made available in the 13th century and still various radish kimchis such as water kimchi and cubed radish kimchi(ggakdugi) are still on the Korean's dining table, radish kimchi might have become a representative kimchi.

Or as written in the 『*Sejongsillok*』 in the 15th century that chive kimchi, radish kimchi, water cress kimchi, and bamboo shoot kimchi were served on the ancestral rite table,³ chive kimchi or water cress kimchi might have become a representative kimchi.

『*Jeungbosallimgyeongje*』 published in the 18th century introduces various kinds of kimchi and respective recipes other than cabbage kimchi ; wax gourd kimchi, cucumber garlic kimchi, stuffed cucumber kimchi, Youninoiji, salt pickled cucumber, ginger root kimchi, turnip kimchi, radish water kimchi, Musun kimchi, pickled chive, Buchukkodjuligi, cattail kimchi, mountain mustard leaves kimchi, water cress kimchi, mustard leaves kimchi, and others. The variety of kimchi was almost limitless.

By the late Joseon period, kimchi varieties were so extensive that they are reminiscent of the warring periods. But going through the 18th and 19th century, they were narrowed down to radish kimchi and cabbage kimchi as found in the old books on seasonal customs

『*Gyeongdojapji*』 which records seasonal customs of Seoul around the 19th century introduces a combined type kimchi of Seoul, which is similar to today's kimjang kimchi, made of cabbage and radish. It wrote that cabbage and radish were the main ingredients where conch, abalone, croaker, shrimp sauce and various condiments such as red pepper powder, garlic and others are mixed.

Kimchi is made with boiled shrimp sauce, radish, cabbage, garlic, red pepper powder, conch, abalone, croaker, and others. They are all mixed and then put in a jar, by the time winter is over, it becomes very spicy.⁴

3_ 『*Sejongsillok*』 the 8th year, May 19. “第一行, 韭菹在前, 醃菹次之。第二行, 菁菹在前, 鹿醃、芹菹次之。第三行, 兔醃在前, 笋菹、魚醃次之。”

4_ 『京都雜志』酒食. “雜菹 煮蝦鹽汁候清 蘿菹 松 蒜 蕃椒 螺鮓 石首魚 陶甕和淹 經冬辛烈.”

The kimchi is named 'japjeo', which is believed to mean 'composite type kimchi' made of many special ingredients, though at a glance it may seem a hodgepodge mixture of ingredients without considering style or any form of sophistication. Whether it be cabbage kimchi or radish kimchi or seokbakji(kimchi with radish, cabbage with various sea foods), a kimchi similar to the current cabbage kimchi is believed to have appeared around this period. 『Yeollyangsesigi』 which was published about one hundred years after also confirms radish and cabbage were the main ingredients of kimchi then.

By October, it is getting cold and each house prepares wintering. Of all the preparations, kimjang(winter kimchi making) is most important. Radish and cabbages are preserved in salt, rinsed and then mixed with various condiments like red pepper, ginger, green onion, garlic and others. The mixed ingredients are put in jars and sealed tight so that it won't freeze. Dufu(Chinese poet, 712~ 770) wrote in his poem "winter radish is half of the meal", the winter radish is believed something similar to kimjang in Korea.⁵

『Dongguksesigi』('Record of annual events and seasonable customs', by Hong Seok-mo, 1849) also shows no difference from the above two books of 『Yeollyangsesigi』, 『Gyeongdojapji』. Radish and cabbage were main ingredients, the only difference of the kimchi in this book was that it used more condiments.

In October, it is a Seoul custom to do kimjang with radish, cabbage, garlic, red pepper, salt and other ingredients. Making soy sauce in spring, kimjang(winter kimchi making) in winter are the two most important seasonal events for every household.⁶

In November, people make dongchimi(water kimchi) with small root radish... (some parts omitted)... Using shrimp sauce make kimchi with

5_ 『洌陽歲時記』. “孟冬始寒人家御冬 百用莫不及此措置 而沈藏爲大政 沈藏者取蘿蔔根松菜莖沈鹽水爲菹 加椒薑蔥蒜諸味醃盛 杜子美秋菜詩曰冬菹飯之半 此謂也.”

6_ 『東國歲時記』 十月條. “都俗 以蔓菁蒜蔥椒鹽沈菹于陶甕 夏醬冬菹卽人家一年之大計也.”

radish, cabbage, garlic, ginger, red pepper, sea staghorn, abalone, conch, oyster, croaker, salt and other ingredients of choice. The kimchi is kept in jars, and after winter it makes a tasty spicy side dish. Besides, people make radish, cabbage, water cress, ginger, red pepper jangajji(salted vegetables) which are their favorite side dishes.⁷

Up until the 18th century, turnip, cucumber, eggplant, chive, water cress, green onion, bamboo shoots were the kimchi ingredients. But As of the 19th century, radish and napa cabbage became main ingredients and the two following phenomena took place.

First, kimchi became a high-class food. As found in 『*Gyeongdo japji*』, a book on seasonal events around the 19th century in Seoul. Seoul kimchi was made with napa cabbage, radish, shrimp sauce, garlic, red pepper, conch, abalone, croaker and others.

Since the end of Goryeo period, napa cabbage, the main ingredient of kimchi was synonymous with as being the luxury vegetable. Except for fishing villages, salted shrimp as well was only for the upper class people of the Joseon Kingdom. It was also an item of tributes to China. Prior to the 18th century when fishing technology was not developed and the distribution system was not yet in place, most of the seafood including shrimp was expensive, the farther away from the sea, the more expensive. Even when seafood prices were lower, kimchi with croaker, conch, and abalone in it still was a very expensive special dish. Considering red pepper, as was in the western world used in place of expensive spices like black pepper or Chinese pepper, the kimchi mentioned in 『*Gyeongdojapji*』 must have been a luxury item.

In addition to cabbage, all the kimchi ingredients mentioned in the 19th century historical references such as salted fish, fish sauce, seafood, salt and others were very expensive until the end of the 18th century.⁸

Second phenomenon was the standardization of kimchi. Jo Jae-seon wrote that 『*Imwonsimjukji*』(Seo Yu-gu, 1835, an encyclopedic book

7_ 『東國歲時記』十一月條. “取蔓菁根小者作菹名曰冬沈 …… 用蝦鹽汁候清沈蔓菁菹蒜薑椒青角鰕螺石花石首魚鹽作雜菹 儲陶甕和淹 經冬辛烈可食 又以蔓菁菹芹薑椒沈醬菹食之.”

8_ CL Park, 『The History of Whole Kimchi』, Minsokwon, 2013, p77.

on farming, forest, medicine published in the late Joseon period) quoted most of the vegetables included in the 『*Jeungbosallimgyeongje*』 (Yu Jung-im, 1766) but they were listed in the order of radish, cabbage, cucumber, eggplant different from 『*Jeungbosallimgyeongje*』's bamboo shoot, eggplant, cabbage, cucumber, and radish. It is believed to suggest that cabbage and radish by then became the main ingredients of kimchi. The variety of kimchi grew smaller because various vegetables which used to be the ingredients of independent kimchi came to be used as minor ingredients for radish and cabbage kimchis.⁹

Standardization of kimchi in other words suggests the high quality kimchi had spread across the board. In other words, it was no longer the high-quality expensive kimchi for the small number of upper class people but, though there were some quality differences, majority of the households came to eat radish kimchi and cabbage kimchi mixed with expensive condiments such as salted fish, garlic, ginger and others.

Why of the numerous kinds of kimchi that had been popular until mid Joseon period faded away and cabbage kimchi and radish kimchi, particularly cabbage kimchi emerged a representative kimchi?

Politics, economy, social, culture, science and many other factors must have been behind the high quality kimchi and kimchi standardization. While various interpretations from various angles would be possible, income changes in the 18th and 19th centuries of Joseon which brought changes to the dietary life of the Korean people is believed one very important reason.

These days, Koreans dining table is with fish, meat, seasonal vegetables, various side dishes, however, basic items are still rice, kimchi, and soup. The 19th century dining table was not too different, other than less numbers of side dishes compared with today's.

The basic dinning pattern of boiled rice, soup, and kimchi is to help eat a lot of rice. Side dishes are supplementary. Joseon people was known to be a big eater, they ate a bowl of rice heaped up as if another bowl



9_ JS Jo, 「Kimchi ingredients and recipe changes」, 『Humanistic Understanding of Kimchi and Kimjang Culture』, World Institute of Kimchi, 2013.

was put on the top. Drumming the full belly was considered fun. Gang Hui-maeng(1424~ 1483)'s poem 「Drumming the Belly」 describes the Joseon people's big eating habit:

Sweet scent boiled barley is in a basket
Tasty curly mallow soup is overflowing the spoon
Both old and young sit around the table
Chattering about the sweet smell of foods
To eat to their fill
Strutting, drumming the bulging belly is a great fun

In early 19th century, Jeong Yak-yong(the great practical learning scholar of Joseon, 1762 ~ 1836)'s poem 「Barley Threshing」 also describes Joseon people were big eaters.

Newly made makgeolli (brew rice wine) is white like milk
Boiled barley in a big bowl is one ja (old unit of length, one ja equals 30.3cm) high
After the meal, I went out to threshing ground carrying flail
Tanned shoulders are glossy under the sunlight
Shouting hoya hoya flailing to the rhythm
Soon barley heads are all over
Exchanging folk songs getting louder
Barley heads pop up high to the roof
Workers all look joyous
They are surely not the slaves to the body
Paradise is not far away
For what anyone would become a lonely wanderer

Jeong Yak-yong wrote a big bowl of barley is one ja high, about 30cm in the metric system. Old bowl was bigger than today's, boiled barley was heaped up there 30cm high was almost equivalent to the amount of a rice cooker today. Is it possible one person ate that much? This must

be old people's usual exaggeration, but to an extent there is some truth to it. By the end of the 1960s, I remember farmer's bowl was almost 20cm high.

Foreigners during Korea's opening of the ports period, westerners looked at Koreans' eating huge meal in amazement. A German geographer Lautenzach who traveled Korea in the 1930s wrote in his travel essay 『Korea』 that Koreans ate a heaped up bowl of boiled rice but they didn't have obesity problem.¹⁰ Other than a huge amount of boiled rice, only accompanying side dishes available were cabbage kimchi with scarce condiments and jjanji(salt pickled vegetables). The foods could hardly produce obesity problem for the farmer who works hard all day long.

Kimchi has been developed to help eat rice more and tastier. Most oriental countries whose staple food is bland grains use salty condiments a lot such as soy sauce or soybean paste or fish sauce. To supply saltiness, in the cold northeast Asian regions, soy sauce and soybean paste were developed and various fish sauces using small fish or shrimps in southeast Asia. Korea located in the middle of the two regions has both soybean –based condiments and fish sauce.¹¹

As bland grains need an accompaniment of saltiness, for example fish sauce or soy sauce or soybean paste, kimchi a side dish having both fish sauce and salt in it was an excellent side dish to have with bigger amount of rice.¹²

Beside kimchi development history, why has the cabbage kimchi become a representative kimchi by the 18 ~ 19th centuries? What was the cabbage kimchi then like and what was the economic situation that would give an answer to the question.

The whole cabbage kimchi like today's was most luxurious food made of all very expensive special ingredients. In the past, each ingredient

10_ JS Kim, 『Korea and Koreans in the 1930s seen by a German scholar, Kyunghyangshinmun, April 10, 1998.

11_ SL Lee, 『The Fermented Foods of Korea』, Ewha Woman's University, 1986, p321.

12_ JS Jeong, 『Korean meals』, 『History of Korea』 vol.112, Korean History Association, 2001, pp87~88.

of the cabbage kimchi was an ingredient for independent food. Not to mention salt, cabbage, radish, various fish sauce, various condiments like ginger, garlic, red pepper powder, and others were all special ingredients. Cabbage kimchi is the composite of those.

Farmers who ate a heaped up boiled barley and worked on the rice paddies and dry fields couldn't afford the expensive kimchi. It cannot be without reasons that the luxury kimchi which used to be only for the upper class few spread to the general public and became a representative Korean food.

The 18th and 19th century economic development of Joseon was the background of how the whole cabbage kimchi was developed in early 20th century

For the Koreans whose staple food is rice, rice is the superlative grain of all grains. In the 18th century, rice production increased greatly, as a result, rice had been made available even for farmers and the low class people who only could afford the barley or multi-grains before.

When rice the most expensive grain became a staple food, equal level side dishes that could be a reasonable accompaniment to rice came to be required. As a matter of course, high quality kimchi followed, and it was the beginning of the cabbage kimchi. In other words, the 18th century economic development of Joseon, income increase, rice became a staple food led to the creation of the cabbage kimchi.

3. The 18th and 19th century Joseon was a rice heaven

What did the people of the 18th century Joseon eat which is said to be the renaissance of Joseon period when the great kings Yeongjo and Jeongjo ruled? As the Renaissance bloomed thanks to the economic wealth of Florence and Venice, so too the renaissance in late Joseon period.

Did the 18th century Joseon people have enough to eat? When it was

only scores of years ago Koreans got over the spring famine called ‘barley hump’, how was it 200 years ago?

Today, Korea has more than enough rice. But it was as late as 1975 just 40 years ago when Korea became self-sufficient in rice. Rice shortage had long been a chronic national problem, and ‘let’s eat mixed grains’ was an on-going national campaign encouraging people to have them eat more mixed grains to save rice. There was even a song eulogizing the advantages of eating mixed grains. At schools, lunch inspection was done every day to make sure students eat rice mixed with grains.

Cock-a doodle-do morning dawns/Boknam’s families are eating their breakfast/sitting in a huddle eating boiled barley/ boiled barley tastier than honey/ barley eaters are healthy.

-Let’s eat mixed grains song-

Up to the 1960s, spring poverty was still serious. May ~ June when autumn harvest ran out but barley was not ready for harvest, the farm families or poor people had to worry about feeding themselves day by day. Those who ran out of provisions had to go out to gather wild herbs and make porridge with them. They struggled to stay alive eating herb-roots and tree-bark.

“People can eat rice and meat soup to their fill” was North Korea’s slogan adopted at the 3rd Supreme People’s Assembly in October 1962. It was their ideal country model. At the time, South Korean economy was far behind North Korea, and rice and meat soup was everyone’s dream in South Korea too.¹³

If that was the situation in the 1960s, in the 1950s when Korea suffered the Korean War (1950~1953), it is obvious situation must have been worse, worse yet during the Japanese colonization period (1910~1945) when most of the grains was robbed by the Japanese colonist



13_ DR Yun, ‘Rice, the Gift of God’, Cheongbori media, 2011, p120.

under ‘quota collection’. Few Koreans could afford eating rice.

What was the supply and demand situation in the 18 ~ 19th century, late and the end of Joseon? Judging based on a common sense, it can be imagined situation was bad compared with the 1980s’ when the Korean economy achieved the unheard of explosive growth.

It is a general assumption considering the expressions ‘barley hump’ ‘eating herb-roots and tree-bark’ that rice was only for the ruling upper class people, and the low class people, farmers, and the low income bracket should be content with barley and multi-grains. For them rice was only for special holidays and memorial services. The rice production during the Joseon period is believed to have been no bigger than barley and other grains production.

How come the cabbage kimchi was developed cabbage was a very expensive ingredient then. when most of Joseon people except for few ruling class people eat barley and multi-grains and rice was only for some upper class people?

As repeatedly emphasized in the above, all the cabbage kimchi ingredients, cabbage, salted fish, ginger, and salt were expensive items. Therefore, the cabbage kimchi was an appropriate accompaniment to the most expensive grain rice, not for boiled barley or multi grains.

What was the supply and demand of rice during the 18th and 19th century when the cabbage kimchi similar to today’s was developed?

Early 18th century book, Yi Ik’s(1681~ 1763, a leading practical learning scholar of Joseon period) 『*Seonghosaeseol*』(‘essays of seongho’, encyclopedic book) describes the 18th century grain situation as follows

Jeollado has the sea on the west and the south and a big mountain range on its east. It has extensive rice paddies. When time comes water is supplied to rice paddies, young rice plants are planted, after farm work is done, farmers eat rice. Beans and barley are considered humble.¹⁴

14_ 『星湖僿說』人事門 生財. “全羅道西南皆海東以大嶺爲界...多稻田務灌溉時至 移秧農功煞歇民皆飯稻而賤菽麥.”

What Yi Ik wrote in his 『*Seonghosaseol*』 might apply only to the grain belt of Korea Jeolla –do region? The old references of the late 18th century wrote almost the same. For example, the record of October 15 of the 22nd year of King Jeongjo’s reign(1798) in the 『*Seungjeongwonilgi*』(‘the Diaries of the Royal Secretariat’) says as follows.

People think rice is precious but not of millet. Even the poorest and the lowest want to eat rice, but not grains.¹⁵

Given the record of the 『*Seungjeongwonilgi*』, eating rice was not limited to certain rice belt regions. Most Joseon people eat more rice than grains in their daily life. People didn’t want boiled millet or barley, even unpolished rice was not people’s preference suggests rice was the staple food for the ordinary people.

『*Monggyeongdangilsa*』 written by Seo Gyeong-sun, a civil servant during King Cheoljong who went to Janjing as an assistant envoy provides a picture of Korean’s dietary life then. On his way to Yanjing, China, he was given a meager meal and wrote of it as follows.

I was given a dinner table. A bowl of rice, a bowl of soup, and one assorted side dish with as small as a child’s hand size croaker, half of a boiled egg, black pepper sprinkled soy sauce put on a wooden board was all. Scooped one spoonful of rice, rice scatters like mercury, putting it in the mouth it feels like sands in the Ganges river. I was angry and my face turned red... (some parts omitted). “Though I am but a poor civil servant, sometimes pressed to worry about feeding myself, when I am home, I eat white rice with at least more than two side dishes arranged on the decent high-legged Tongyeong table. You treat us, the Korean

15_ 『承政院日記』 正祖 22年 10月 15日. “而士俗貴租不貴粟, 雖至窮至殘之類, 必飯稻稬, 不食脫粟.”

envoy, with this worse than the poor table served at a low class inn in my country!¹⁶

Regardless whether there might be some exaggerations in it, it might be a literary expression not fully reflecting the reality picture, or it might be true, the 18th and 19th century references tells us that the Joseon people, even those who was making poor living ate white rice.

They might not have eaten white rice three meals a day, 365 days a year. Given 『*Seonghosaseol*』 published in early 18th century which says the rice farming and barley faming was done alternately, it is believed two harvests a year was possible. It suggests people would eat rice and barley alternately or rice and barley mix. In late Joseon period, the term ‘barley hump’ was in use, and it is certain barley was an important food. In some regions, for example northern part of Korea with less rice paddies, rice could not be a staple food. People ate grains more. 『*Imwongyeongjeji*』 by Seo Yu-gu(1764~1845) in early mid Joseon period describes the regional differences of staple food.

Two harvests a year was possible. When barley was running low comes the rice harvest season, when rice was running out it is the season for barley harvest. If anyone misses one harvest, they are bound to suffer hunger.¹⁷

South Koreans cook rice well, north Koreans millet.¹⁸

There might be regional and seasonal differences in the significance of rice, but except for when famine hit in the 18th and 19th century

16_ 『夢經堂日史』 “自廚房備進夕飯。木板上置一鉢飯，一器羹，一椀饌。饌則民魚如小兒掌一片。烹卵一剖。蝦醢少撮。椒漿半匙。合盛而已。飯則舉匙而水銀潑地。入口而恒沙淘河。氣忿忿面皮紫漲。準擬大叱喝。捉入乾糧馬頭。忽思俄於下處庫直。一遭無顏。又被強嘴於馬頭。則豈非大敗乎。乃忍住蠱氣。低聲謂弘燁曰。第招乾糧馬頭來。曰。余家至貧。雖朝不食夕不食。飯必炊白米。饌必排數椀。床必有高足統營盤矣。汝之待我。今不如我東炭幕七分床乎。”

17_ 『星湖僿說』 人事門. “一年兩秋，麥盡而禾成 禾盡而麥成 故一年而兩秋 一或有失民必飢。”

18_ 『林園經濟志』 鼎俎志. “南人善炊稻飯 北人善炊粟飯。”

and the poorest class people, it doesn't seem that people were forced to make a hard living to the extent that they eat rice after rice harvest but boiled barley when rice ran out, when the barley is depleted, they had to herb-roots and tree-barks. In most of the households, barley was a supplementary grain to rice. Jeong In-sik in his paper wrote that the 1910 statistics, a little before the Japanese exploitation began show that rice production was 8.14 million seom(weight measure, 1 seom equals 180ℓ) about 44% of the total grain production and 16% or 2.87 mil. seom of barley.¹⁹

Considering that rice takes up almost half of the total grain production, it is believed boiled rice was the staple food in late Joseon period with barley and other grains being supplementary to rice.

The above record on the market of Joseon tell us the general assumption thinking in the 18th and 19th century the white rice was only for the ruling upper class, and farmers and the low class people could eat rice only on special holidays or memorial services is not correct.

Rice consumption increase in turn brought rice supply increase, and rice came to take up majority exchanges in the grain markets in late Joseon period.

『Seungjeongwonilgi』in 1783 during king Jeonjo has a record of what amount of rice was sold in the market of Seoul.

Seoul population is around 200,000. Supposing they eat two does a day (doe: Korean unit of measure, 1 doe= 1.8ℓ), 1 million seom of rice is needed a year to feed Seoul people. Government offices collect only less than 0.2 mil. seom a year, farm rent collected by the Confucian intellectuals, whether they be rich or poor, was no bigger than 0.2 mil. seom a year.²⁰

19_ IS Jeong, 「On the staple food in late Joseon period」, 『Inmun Nonchong』 vol. 4, 1997.

20_ 『承政院日記』正祖 7年 9月 9日. “都下人民, 今爲二十萬餘口, 而日計二升, 則一年當食百萬石米, 而目今地部所管諸倉及他餘公家所出米穀, 零零注合, 終不滿二十萬石。私家穀物, 則士大夫富少貧多, 家家所謂秋收之輸入城中者, 都不滿二十萬餘石米矣。”

It means about 0.6 mil. seom, more than half of the needed 1 mil. seom for Seoul population was bought from the market, which means farmers that had surplus rice to sell to the market in exchange for everyday necessities and that they produced more than the market supply amount considering they would have left at least some rice for themselves.

Rice trading was done nationwide in the 18th and 19th century. According to 『Imwongyeongjeji』, of the total 325 markets nationwide, rice trading was done at 260 markets, bean at 175, barley at 157. It suggests that rice consumption was big, so was rice trading.²¹

Rice supply was in shortage just 40 ~ 50 years ago to the extent that ‘white rice and meat soup’ was the slogan for an ideal society. Encouraging people to eat more other grains than rice was a national policy. How come 18 ~ 19th century had that much plentiful of rice?

Farming technology development followed by production increase, breed improvement, rice consumption increase thanks in parts to the conversion of land to rice paddies were the main reasons. A record of the 4th year of King Heonjong(1838) in the 『Gukjobogam』 (‘exemplars of good governance’) has practical learning scholar Seo Yu-gu’s appeal to the king. The appeal tells us that much efforts have been made for breed improvement and distribution. Conversion of land to rice paddies done to meet the increased rice consumption was causing unexpected problems.

There is the 60 days rice in Tongzhou, China. It is to be planted in early autumn and harvest in early winter. Shanghai and 청포 have a rice breed called ‘red rice’ that grows in deep water. June is the planting season for it and it grows till September. Deokanbu is known to have a late rice named ‘hyangja’ which will be ready to harvest in 50 ~ 60 days from planting. In my opinion, whenever Korean envoys visit China, it would be good to have them find the rice breed through whatever channels possible and distribute them to be planted in the 8 provinces. Within 1

21_ National History Compilation Committee, 『Economy, production increase and social diversification in late Joseon』, 『New edition Korean history』 vol. 33, 2002.

or 2 years, people will begin enjoying the benefits from the new breed seeds, and it will be of tremendous help in overcoming the natural disasters and famines.

I have also heard that dry field farming is ten times more difficult than rice farming. Over the last hundred year period, eating rice became a general practice in everyday living. In order to meet increased rice consumption, dry fields and even the terraced farm fields on mountain hills away from water sources had been converted into rice paddies. But when droughts hit, no rice cultivation is possible on the lands while they are still recorded in the government document as taxable dry fields. There is no system of exempting taxes for the damaged lands, worse yet farmers are exposed to wicked petty officials charging taxes on the wasteland farmers suffering is tremendous, all ill practices against the principles of governing that everything should be clear and fair.

It is my opinion that strict laws need to be established. Thorough inspection should be done on the lands that have been changed into rice paddies and except for the lands having water resources or irrigation canals are connected, all the lands should be changed back to dry field. Anyone who violate the prohibition should be put to strict punishment as defined in the 『*Daejeon*』(‘national code’), and this will be of great help in increasing foods for the people and preparing for the natural disasters.

Rice was the king of the five grains(rice, barley, millet, bean, hog millet) in Korea. To eat the prime grain requires equally prime side dish. According to old references, it seems the 18century people made not a little effort to prepare best side dishes.

Today, to spend more on side dishes is normal. But 200 years ago, side dish expenses were far bigger than for the main staple rice may sound off.

『Seungjeongwonilgi』 in the record of the 7th year of King Jeongjo, wrote that the rich families spend ten times or at least 4 ~ 5 times of the rice expenses on side dishes and even the poor families spend about similar amount of money for side dishes as they do on rice. The prices of fish and fish sauce, the main side dishes were part of the big expenses on side dishes. After the Equalized Tax Law was introduced that requires people to pay taxes in fish and salt, fish and salt had become increasingly hard to get in the market, thus their prices skyrocketed.²²

The record says increased side dish expense was the systematic problem after the establishment of the Equalized Tax Law Office, however, it seems regardless rich or poor, people were willing to spend on good side dishes to have rice with.

The 18th century, when rice emerged a staple food of Korea, witnessed a demand increase for fish and vegetables. It means conditions were ready for the development of kimchi that provides both fish and vegetables.

4. Napa cabbage kimchi, the composite of best ingredients

Why was the napa cabbage kimchi considered the prime kimchi? These days, cabbage kimchi is one of many kinds of kimchis, however, in the past it was a very special expensive kimchi.

According to Seo Geo-jeong (1420~ 1488) in early Joseon period “Radish leaves, radish, lettuce, water cress, taro mixed with condiments can make soups and kimchis.”²³



22_ 『承政院日記』 正祖 7年 9月 9日. “富家之盤饌, 一日之費, 十倍於米價, 或四五倍於米價, 雖貧家盤饌之費, 與米價 相等, 而所謂盤饌魚鹽是耳。近年魚鹽絕貴, 人皆曰, 均役廳創設以後, 魚鹽漸漸極貴矣。”

23_ 『續東文選』 제4권, 巡菜圖有作. “蕪菁蘿蔔與蒿苣/青芹白芋仍紫蘇/薑蒜蔥蓼五味全/細燂爲羹沈爲菹.”

Depending on social status and economic level, people eat different kinds of kimchi. It was not anyone can eat any kinds of kimchi. There was a story when fish sauce was scarce, someone ate cucumber kimchi mixed with salted shrimp. It was very delicious, he called it a ‘moving kimchi’.²⁴

Cabbage kimchi was very special as well because cabbage was an expensive vegetable. Cabbage kimchi appeared as late as in the 18th century, the late appearance is believed because it needs various expensive ingredients that complete the taste of cabbage kimchi.

How precious cabbage was can be found in many old references. In the 『*Hyangyakgugubbang*』 published in the 23rd year of king Gojong (1236), cabbage is written as a medicinal herb. In Seo Geo-jeong’s poem as well cabbage was regarded as a high class vegetable.

In autumn, cabbage gets even better
Its taste equals dainty foods
Who would boast about taro soup?
Bass slices are nothing
If you make a soup out of it, it exactly suits your taste
Also an excellent side dish to accompany alcoholic beverage.
I don’t need meat.
I cannot forget the taste of this vegetable

Taro soup was a very special food to the point that it was called ‘a fairy food’, the famous Chinese poet Su Dongpo loved it. Bass sashimi is said to be Chinese emperor Sui-Yang-Di (隋煬帝)’s favorite. The poem says cabbage tastes better than the dainty foods. At the end of the Qing Dynasty, 薛寶辰(1850 ~ 1926) wrote of 170 kinds of vegetables in his 『*Sikryochanyo*』(‘Brief Document of Vegetables’) where he said

24_ 『於于野談』3 學藝篇 衣食. “紫蝦醢沈瓜菹 俗謂之感動醢 東方下味也. 天使昔過海州 食紫蝦瓜菹 飲泣不忍食 遠接使怪問之 天使曰 “吾有老母 在萬里之外 此味甚珍 不忍下咽” 遠接使卓州官進之 天使曰 “不勝感動” 故名其醢曰 ‘感動菹’.”

“Cabbage, the white vegetable is the king of all vegetables. It is beyond comparison.”²⁵

Judging from the record saying that Seo Geo-jeong (1420 ~ 1488) was greatly pleased when he received cabbage seeds from China, the tasty vegetable cabbage distribution came later.

Such precious cabbage made its appearance as an ingredient in kimchi.

Cabbage is found in the 『*Jeungbosallimgyeongje*』 encyclopedic books published in 1766. The book introduces kimchi a recipe in the defense of cabbage.

A very expensive vegetable in early Joseon Kingdom it became a kimchi ingredient by late Joseon. It is believed the result of species improvement, expanded cabbage seed distribution, and expansion of land cultivation. This increase demand brought supply increase true to the law of demand and supply.

Up to early Joseon period, cabbage was the vegetable used for royal ancestral rites' food and it was a tribute item presented to the king by the villages of Gyeonggi -do province. 『*Sejongsillok*』 has it that wild edible herbs and bracken from March to April, napa cabbage from April to May were presented to the Munsojeon(a shrine in the Gyeongbokgung place) and the Gwanghyojeon(shrine) every morning and evening. The vegetables were supplied by Gyeonggido villages.²⁶

According to old references, it is very likely that up until early Joseon, cabbage was such an expensive vegetable that only a limited amount was supplied to the royal court. Considering the old records, it is believed napa cabbage was a very precious vegetable. Based on the facts that cabbage was very expensive and the price of the imported cabbage seeds from China, the cabbage growing villages of Gyeonggi -do province mentioned in 『*Sejongsillok*』 are believed the ones outside the four gates of Seoul. They cultivated cabbage for the royal court



25_ 『素食說略』. “菘 白菜也 是為諸蔬之冠 非一切菜所能比. 以洗淨生菜 酌加鹽 酒悶爛 最為雋永, 或揀嫩菜 心橫切之 整放盤中 以香油 醬油 醋燒滾 淬二三次 名‘瓦口白菜’ 特為清脆.”

26_ 『世宗實錄』 12年 3月 27日. “前此文昭殿、廣孝殿朝夕供進山菜蕨菜, 則自三月朔至四月望, 白菜則自四月至五月, 令京畿各官供進.”

ancestral services or for the upper class people.

In early 16th century, 『Yongjaechonghwa』, a collection of essays of Seong Hyeon (Joseon scholar, 1439~1504) published in 1525 wrote “All vegetables and fruits are planted on the lands suited to their respective characters. In Wangsipni outside the East Gate, turnip, radish and cabbage were planted.”²⁷ The chapter of Hanseongbu(Seoul) in the 『Sinjungdonggukyeojisungnam』 published in similar period also wrote “Wangsimni is about 5 li from the East Gate. People grow radish and cabbage there making a living from it.”, suggesting commercial cabbage cultivation was being done.

『Haedongjapnok』 by Gweon Byeol (Joseon scholar) published in 1670 about 150 after the 『Yongjae Chonghwa』 has it that “菘菜 in Chinese character is called ‘baechu’ napa cabbage in Korean. In Hanyang, cabbages are grown outside the walls. As people enjoy cabbage, cabbage cultivation makes a good profit.” It tells us cabbage demand increased tremendously, and in turn led to supply increase and cabbage growing profitable for farmers.

『YongjaeChonghwa』 in early 19th century, another 150 years after the 『Haedong japnok』, the surrounding areas of the capitol city Hanyang seemed to have turned into the lucrative crop growing regions including cabbage. In 『Gyeongseyupyo』 Jeong Yak-yong said “the dry fields near Seoul are all excellent farmlands, there grows water cress and cabbage.”²⁸

With the farmlands near Seoul had turned into water cress and cabbage fields it is believed by then cabbage was no longer a special vegetable only for the rich and the upper class people. It became an everyday item for most of Seoul people. Cabbage demand increase and cabbage sales could make big profits were what prompted more cabbage and water cress growing in surrounding areas of Seoul.

27_ 『慵齋叢話』 “凡菜菓。皆隨土宜而種之。以收其利。今東大門外往審坪。種蕪菁蘿蔔白菜之類。”

28_ 『經世遺表』 卷8, 田制 12. “又京城負郭之田。皆上上芹菘之圃。”

The profits from the vegetable growing fields seemed to have been high that Jeong Yak-yong wrote in his 『*Gyeongseyupyo*』 “all the dry fields near Seoul were owned by civilians. They don’t want to sell their lands, the government didn’t have money to buy them either”. It suggests the land price there was much higher than in other regions.

In short, the cabbage growing which was done outside the four gates of Seoul in mid 15th century at the time of King Sejong had expanded by 17th century to Wangsipni and to the outskirts of Seoul.

Cabbage growing land expansion was to meet the increased cabbage demand and also because it was profitable. According to 『*Gyeongseyupyo*』, the price of water cress and cabbage growing fields in neighboring regions of Seoul was about 4 ~ 8 times higher than other regions’.

An increased demand for cabbage encouraged an increased supply which in turn reduced price. This is how cabbage kimchi emerged a representative kimchi while other various kimchis faded away.

Thanks to supply increase and decreased price, the cabbage which well matches the rice and used to be the expensive vegetable only for the few rich came to be made available for the ordinary people as well.

5. A combination of cabbage, the king of vegetables and tasty salted fish

By the 19th century, cabbage kimchi had firmly established itself as a core side dish of the Korean meal. Regardless of social status for both the rich and poor, white rice, cabbage kimchi, soup, and soybean-based saltiness became the standard items of the Korean meal.

According to 『*Siuijeonseo*』 at the end of the 19th century, rice, soup, kimchi, soy sauce, and stew plus grilled fish, wild edible greens, salted seafood became an established table setting for the upper class people’s meal. According to the October chapter of the ‘Nongawolryeongga’ by

Jeong Hak-yu(1786~1855) cabbage kimchi was served on the dining table for the farmers who were the rock base of the Korean society. Cabbage kimchi was the core item of their dining table as well.

Let's harvest radish and cabbage to make winter kimchi,
Let's wash them in the stream and salt them to an appropriate saltiness.
Red pepper, garlic, ginger, green onion, fish sauce

The basic ingredients of farmers' winter kimchi were radish, cabbage, fish sauce, and ginger, more or less the same as today's. How did cabbage, salted fish, and ginger, the ingredients so expensive in the 16~ 17th century that only the upper class could afford advanced to the dining table of the farmers?

As mentioned in the above, demand increase and seed improvement brought increased supply after the 18th and 19th century. Increased supply of salted fish was also achieved through the similar process of cabbage; fishing technology development, increased amount of catch, and market development in late Joseon period. While salted fish is the essential ingredient for kimchi, respective regions use different fish. Middle regions use shrimp and yellow croaker, southern regions anchovy, and northern regions yellow croaker. Through what process had the salted fish became the essential ingredient for kimchi, especially for cabbage kimchi?

As of the 15th century, fish sauce was a special item only for the few upper class and kimchi with fish sauce in it was a very special food that it was included in the tributes to China. 『*Sejongsillok*』, in the record of the 8th year of his reign has the following.

■

29_ 『世宗實錄』 8年 6月 16日, “送乾古道魚二櫃童子瓜交沈紫蝦醢二缸于迎接都監白彦欲進獻也.”

Two boxes of dried mackerel, two jars of young cucumber kimchi with salted shrimp in it have been sent to the Protocol Office. Baecheon (白彦) wanted it.²⁹

A Chinese envoy wanted cucumber kimchi made with salted shrimp to present to the Chinese emperor. It was not only because Korean cucumber was of top quality but at that time the salted shrimp being a valuable item, it was included in the tributes to the Chinese emperor.

In early 17th century right after the Japanese Invasions of Korea(1592~ 1598), salted shrimp was more expensive than rice maybe because of high demand for salted shrimp. It was a must accompaniment to eat rice, the staple food of the upper class people. This fact is confirmed in 『*Soemirok*』(a diary of 9 years and 3 months, fleeing from the Japanese Invasions of Korea, 1592~ 1598) written by O Hui-mun(1539~ 1613).

I found there was no reasonable side dish at home. Just then, a salted shrimp seller was outside shouting. I called him in and bought 4 little bowl cups of salted shrimp, which was about a half bowl, in return for 1 mal(Korean unit of measure, 1 mal = about 18 liters) of good quality rice. When salted shrimp price is like this, other commodity prices need no further mention. When it is not certain if I and my families can have breakfast and dinner, ... talking about salted shrimp ... sound sheer nonsense. Those who are ill and children as well don't want to eat without salted shrimp side dish..... I feel heavy.³⁰

Salted shrimp price must be very high that one mal of rice could buy only half a bowl of salted shrimp. It explains the proverbs “In ancient times if a salted shrimp seller comes to a mountain village, an unmarried woman welcomed him more than she would for matchmaker. Married man welcomed him more than mother-in-law. Salted shrimp

30_ 『鎖尾錄』丙申日錄 10月 28日. “家無饌物 適有蝦醢呼賣者 卽招來 租好一斗換之 則乃四從子 而僅半沙鉢 以不用之醢 其價如此 他可 推知 窮困之中 朝夕尙難繼用 況蝦及於助食之物乎 病兒等因此尤不顧食 可悶奈何奈何.”

sellers were invited to the reception room of the rich”³¹

The situation being as such, salted shrimp, a represented salted seafood would become more of a luxury item in inlands, more so as getting further away from seaside villages. None other than the rich could afford salted fish, not to mention a kimchi with it.

In mid Joseon period, salted fish was as expensive an ingredient as cabbage. It was so costly that kimchi with salted fish was hardly thinkable for the ordinary people. But situation was changed by the 18th and 19th century. Due to fishing technology development and improved distribution system, salted seafood prices plummeted. Increased supply of salted seafood is well shown in the 19th century book 『*Nanhoeomokji*』 (an ichthyology book) by Seo Yu-gu (1764~1845) and 『*Imwongyeongjeji*』. They wrote shrimp was not caught in the east sea of Korea, however salted shrimp all from the west sea had been distributed all over Korea.³²

In the 19th century, a huge amount of salted shrimp was made and distributed all over Korea, and salted shrimp became a common side dish and also a minor ingredient for cabbage kimchi.

Due to limited distribution system and shrimp is caught in the west sea while salted shrimp didn't reach southeastern regions. In his 『*Yeolha ilgi*』 (‘Jehol Diary’) by Park Ji-won (brush name Yeonam ‘swallow rock’, 1831~1805) wrote “Southeastern region people were unaware of the salted shrimp.”

In southern and northern regions of Korea where salted shrimp was not available due to poor distribution system, anchovy and yellow croaker were used. To meet the demand anchovy and yellow corvine catch increased greatly in the 19th century. Abundant catch brought down prices, and salted fish was made available for a wider spectrum of people. Kimchi with salted fish appears frequently in the late 18th and early 19th century recipe books.



31_ GT Lee, 『Kimchi Travelogue』, Design House, 2008, p201.

32_ 『蘭湖漁牧志』 魚名考. “蝦 我國東海無蝦 其鹽醃為醢流溢八域者 皆西海之糠蝦也.”; 『林園經濟志』 佃漁志. “凡今流溢國中 皆西南海產也 其出海州前洋者 尤細軟味佳.”

Anchovy catch was scarce in early Joseon period, however in late Joseon the catch grew greatly to the point that Lee Gyu-gyeong (1788~1863) in his 『*Ojuyeonmunjangjeonsango*』, an encyclopedic book wrote that once the fishing net is thrown, it catches a mountainous amount of anchovy. People eat them raw, grilled, or dried. Dried anchovy was enjoyed nationwide, and it was known throughout. Jeong Yak-jeon as well wrote in his 『*Jasaneobo*』 people make soup with anchovy or fish sauce or dry them to be used as condiments.³³

Anchovy catch was so huge that in Seo Yu-gu's 『*Nanhoeomokji*』 wrote that anchovy are dried on the sandy beach and sold inland for 1 jeon(about one cent) for a fistful. If they go bad they were used as a fertilizer.³⁴

It was the same with yellow croaker that was also used as fish sauce for kimchi. 『*Jasaneobo*』 has it that if a fishing boat encountered so great a school of yellow croaker, it was virtually impossible to load it all onto a boat. Conditions are ready for nationwide use of yellow croaker.³⁵

Cabbage, salted fish and other condiments are the basic ingredients of cabbage kimchi. Cabbage kimchi first appeared in the 18th century and its emergence a representative kimchi in the 19th century was due to enough supply and low prices of the salted fish as the essential ingredients for cabbage kimchi to the availability of the common people. Another reason for cabbage kimchi development is increased rice production. Rice production was so increased that even the common people also could afford it. When boiled rice without salt became a staple food, the demand for a high- class- side dish salted fish as a source of salt grew tremendously. It paved a straight path for the development of cabbage kimchi, a composite of a high class vegetable cabbage and a high class seafood salted fish.

33_ 五洲衍文長箋散稿 鯨鰐辨證說 “鯨即倭書蔑魚字。乃中原及我東鯢。俗稱蔑魚。鯢。似馬而較小。僅三四寸。可膾可炙可羹。取脂爲油。一網如山。” 五洲衍文長箋散稿 八路利病辨證說。
“復有鯢魚。俗呼蔑魚。其麗不億。充牣海濱。未及淨乾。值雨餒敗。以爲糞田。乾者遍及一國。其賤可知也。” 茲山魚譜 “或羹或醢或腊。今之蔑魚醢之腊之充於庶羞。”

34_ 『蘭湖漁牧志』海魚 鯢鰐。 “散鋪沙磧曝乾售于陸地一掬一錢 若逢陰雨 鯢敗則用以糞田美勝熟糞也。”

35_ 『茲山魚譜』石首魚。 “今人網捕之 時遇其群來 得魚如山 舟不勝載。”

6. Kimchi development direction and maintaining kimchi identity

As kimchi is a side dish, an accompaniment to rice, it is entirely subject to changes in rice. This is why thus far we have reviewed the cabbage kimchi development process from the economic perspective in relation with rice.

In short, since 18th century, due to economic development and income growth, rice the king of the grains came to be a staple food and it in turn brought the emergence of the most expensive side dish cabbage kimchi.

Not to mention the sensuous delight of the white rice with cabbage kimchi, because rice was expensive it was bound to be accompanied by expensive side dish. It was natural that cabbage kimchi came to be included in the basic menu of late Joseon period : rice, kimchi, and soup. At the time, cabbage was the most expensive vegetable that it was considered the king of vegetables and salted fish was a rare delicacy. Red pepper was relatively low price condiment, and a good alternative to expensive black pepper and Chinese pepper. Up to mid Joseon, ginger as well was a high class condiment enjoyed mostly by the upper class people.

Those thus- far- expensive ingredients of cabbage, salted fish, and various condiments were made available for the general public thanks to production increase and supply increase which was followed by price decreases. It announces conditions are ready for the appearance of cabbage kimchi in the late 19th and early 20th century.

Cabbage kimchi's first appearance was 200 years ago. As of the 21century, 100 years after the current whole cabbage kimchi was made complete, kimchi seems to be on the point for another changes.

Korea ranking the 15th country in the world in terms of GDP is enjoying the best economy since Dangun, the founder of Korea 5,000 years ago. Everything is changing rapidly, so is Korean's dietary life

pattern. In about 100 or 200 years from now, there might appear completely different type of kimchi as witnessed in the 18 and 19th century.

There are various indications for possible changes. First, westernized dietary life caused decrease in kimchi consumption. Income growth, expansion of eating out culture, and increase of double-income families brought the development of kimchi industry. Kimchi industry development produced an unwelcome byproduct of simplification of kimchi named standardization. Factories produce various kinds of kimchis, however, regional characteristics and each household's unique recipes are fading away.

Eating less kimchi needs a careful attention from various angles because it means more than a decrease in consumption. It may cause qualitative changes in Korean's dietary life. Kimchi consumption decrease is an obvious trend as shown in various statistics. Presently kimchi consumption decrease is not sharp, however in 30 or 50 years when children and young people with westernized eating habit become adult, the consumption decrease will accelerate.

Table 1. Kimchi consumption per person (1998 ~ 2010)³⁶

	1998	2001	2005	2007	2008	2009	2010
Annual (kg)	35.2	36.3	27.9	29	33.3	31.2	28
Daily (g)	121.7	103.7	90.3	80.7	79.4	79.5	

Resource : Agricultural Outlook Center of the Korea Rural Economic Institute,
National health statistics of the Ministry of Health and Welfare

36_ Kimchi consumption decrease is mainly due to changed life style with alternative side dish increase (30.8%), westernized eating habit (17.9%), and others.

An eating less kimchi trend following the changes in the Korean’s eating habit will inevitably affect kimchi demand. What needs special attention is this would bring qualitative changes, not only quantitative changes, to the Korean traditional food kimchi.

A general kimchi consumption decrease will bring cabbage kimchi consumption decrease. Cabbage kimchi’s significance in Korean’s dining has been absolute. According to 2011 statistics, cabbage kimchi takes up 61.5% of the total kimchi consumption, followed by radish kimchi 22%, and various other kinds 16.5%.³⁷ It is expected that there might be changes in the component ratios among various kimchis.

Table 2. Annual rice consumption per person

year	rice consumption	year	rice consumption	year	rice consumption
1963	105,5	1980	132,4	1997	102,4
1964	120,2	1981	131,4	1998	99,2
1965	120,9	1982	130,0	1999	96,9
1966	122,1	1983	129,5	2000	93,6
1967	133,3	1984	130,1	2001	88,9
1968	132,9	1985	128,1	2002	87,0
1969	124,5	1986	127,7	2003	83,2
1970	136,4	1987	126,2	2004	82,0
1971	134,8	1988	122,2	2005	80,7
1972	134,5	1989	121,4	2006	78,8
1973	129,4	1990	119,6	2007	76,9
1974	127,8	1991	116,3	2008	75,8
1975	123,6	1992	112,9	2009	74,0
1976	120,1	1993	110,2	2010	72,8
1977	126,4	1994	108,3	2011	71,2
1978	134,7	1995	106,5	2012	69,8
1979	135,6	1996	104,9	2013	67,2

37_ Lee Yong-seon 「2011 Kimjang market analysis and forecast」, Korea Rural Economic Institute, 2011.

38_ MH Ko, 「Koreans drinking coffee more often than they eat rice... coffee intake calorie jumped 4 times over 10 years period」, Yonhap News, Sept.21, 2014.

Another element that would influence kimchi is the rice consumption decrease following life style changes which has continued for quite a while and will do also in the future. Rice consumption decrease will lead to a decrease in the demand for kimchi, especially cabbage kimchi. Another expected change is the rice component ratio in the Korean diet. There is an interesting statistics supporting this expected change. The 2013 People Health Nutrition Survey conducted by the Korea Centers for Disease Control and Prevention shows coffee ranks the first of what people have most frequently. It is followed by cabbage kimchi, boiled rice with grains, white rice, and other kinds of kimchi.³⁸

An interesting phenomenon found in the above statistics is that grain is ahead of rice. As income increases, western style eating habits and preference for eating grains for health might change people's liking for cabbage kimchi.

As previously reviewed, cabbage kimchi in the 18th and 19th century was the result of a long period development to have tastier and more rice. Cabbage kimchi with salted fish and spicy condiments mixed in it was an excellent accompaniment to the otherwise saltless rice.

Decreased preference for rice, meat consumption increase, and growing interest in health would result in a less rice eating trend. It in turn would change the cabbage kimchi ingredients. In 100 or 200 years, cabbage kimchi would be very different from what it is today. What will it be like? As experienced in the 18th and 19th century, the 22nd century might witness an entirely different kind of kimchi. As old kimchi(mugeunji) receives highlight along with increased meat eating such as all Koreans' favorite 'samgyeopsal'(grilled pork belly), people's preference might change to different kinds of kimchi from cabbage kimchi. As pizza and hamburger brought western type cucumber pickle consumption increase over the Korean traditional salt- pickled cucumber, different type of kimchi might become more popular in the future. Or as is with the kimchi hamburger, kimchi might come to be a significant part of an item, not just a supplementary side dish for eating boiled rice.

From the economic perspective, it is certain Korean's dietary life will change along with income level changes. Likewise kimchi as a core side dish is also subject to changes along with the changes of the times. No definite prediction of kimchi's future is possible, however, one thing to keep in mind for certain is whichever direction the development of kimchi might turn to, the identity of kimchi as being a representative Korean food should never be lost.

The role of fermented products in Mediterranean food culture

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In 2010, “Mediterranean diet” was prized by UNESCO(the European Culture Commission) as a part of the “immaterial heritage of humanity”. I stress: “immaterial heritage”. This means that “Mediterranean diet” is not intended as a simple collection of products, or recipes, but mainly as a heritage of practices and technical knowledge – and, moreover, as a way of living, eating and sharing food, in a strict relationship with other people and the surrounding environment.

The question I will ask here is the following: in this heritage of practices and knowledge, what is the place for fermented foods?

Let’s go directly to the answer: this place is absolutely central and decisive. In a sense, we could say that Mediterranean food culture is literally founded on fermented foods.

The actual base of this culture are bread and wine: the food and the drinkby definition. That is, two fermented products. They are the “base” of Mediterranean dietboth in a material, economic meaning, and in a symbolic, cultural one.

In fact, Mediterranean food culture is founded on the idea that “civilization” – that is, man’s exit from the animal stage, his differentiation from other animals – consists in the capacity of dominating Nature, through skills that only men have, giving them the possibility of creating. In this perspective, the agriculture itself is perceived as a sign of civilization – a creative process, that means not limiting oneself to “gather” what Nature produces, plants and animals, but producing plant and animals in an active way.

In the same perspective, cooking is a sign of civilization, because it transforms natural products (the “resources”) into food. But cooking does not simply mean cooking. It means all procedures that transform and “prepare” natural resources for eating – let’s call it cuisine.

Natural products’ fermentation is an essential element of this concept of cuisine. In ancient societies, “raw” was synonymous of “Nature”, “cooked” was synonymous of “Culture”, as Claude Lévi-Strauss, the famous anthropologist, learnt us. Beside cooking that culturally modifies Nature, another process, fermentation, modifies Nature in an apparently “natural” way: yeast, bacteria, microorganisms take part in “naturally” changing the character of a product; but yeast, bacteria, microorganisms, if they were left to themselves, would not produce a “good” food, but on the contrary, the putrefaction of substance. Human control guides in a different direction – positive instead of negative – this “natural” tendency. That’s why controlled fermentation is in itself a symbol of culture and civilization. A culture, a civilization that appear particularly sophisticated, as they succeed in commanding, giving orders to the microscopic organisms that grow on a grape, or a dough of flour and water.

By means of the yeasts’ work and the fermentation process they start, bread and wine assume a quite particular identity, different from any other food. In the most ancient Mediterranean societies, control of yeasts and bacteria is perceived as the sign of civilization for excellence. In this way, a process that apparently seems to be natural becomes totally artificial – the idea of artifice being, in ancient

cultures, an absolutely positive idea. Only in recent times it changed meaning, since European culture – starting with the new Enlightenment philosophy in the 18th century, and particularly the ideas of Jean-Jacques Rousseau – began considering Nature as the absolute “good”, and artifice as the corruption(not an improvement) of the original state of things.

Bread and wine, together with oil, were assumed as the symbols of Mediterranean civilization, in Greek and Roman times. But the origins of this culture are much older, they go back to thousands years earlier, at the dawn of Egyptian and Mesopotamian civilizations, born on the South-East coasts of the Mediterranean sea and in the so called Fertile Crescent, between the rivers Euphrates and Tigris(nowadays Iraq).

Greek identity(then, Roman identity) were directly related to wheat culture, as the main cereal for making bread. Later on, in medieval times, rye encountered a great success, as a more rustic and resistant plant, suited to a more rudimental agriculture, anyway giving the possibility to produce bread.

Even pasta, in the Middle Ages, when its use began spreading, was intended as a fermented food. This is the definition given by Isydor of Seville, the author of the most popular medieval encyclopedia(7th century). The same occurs in cookbooks: the most ancient one of Italy, written at the beginning of the 14th century, requires “fermented pasta” for making lasagne.

Then we have “festive breads”, that is, the large family of panettoni, “big breads” that everywhere in Italy and Europe are made as a sign of particular days, starting with Christmas – in the Christian era; but this tradition is much more ancient, going back to Roman times. Anyway, fermented foods; and in this case, to stress the difference, to make a daily food the sign of a special day, it will be more fermented, more leavened. “Ferment” is a sign of excellence.

Bread – a sort of metaphor of all yeast fermented foods – became in Mediterranean tradition the symbol of food itself. In Latin language, both ancient and medieval, both pre-Christian and Christian, bread (panis) is food, even charged of religious significance when posed as the fundament of the main Christian rite, Eucharist. In this rite it appears together with wine, the other main protagonist of Mediterranean civilizations.

But going back to ancient times, before wine we find beer – the first fermented drink elaborated by men in these regions. The most ancient text of Mediterranean literature (the so called “saga of Gilgamesh”, written on earthenware tables about four thousand years ago) tells that the “civilization” of the wild man – represented by a character named Enkidu, living among wild beasts in the forest, eating and drinking in the same way they do – occurs exactly when Enkidu learns eating bread and drinking beer. A food and a drink that symbolize the “human” and, at a time, the “social” dimension of the story: bread (we can read in this text) is the “stick of life” for men, the nourishment that gives them force; beer that accompanies bread is a community symbol, that must be drunk “as other people do”, together with them, to enjoy oneself and everyone.

Historically, the birth of beer is parallel to bread’s one: in both cases a cereal is fermented, wheat (for bread) or barley (for beer). It is not a fortuity that Egyptian depictions (earthenware statuettes, or the drawings accompanying hieroglyphs) often show women preparing dough for bread, while beer recipients stand on their side. Women – that means a knowledge and practices mainly developed on a domestic sphere, as a family matter. Note that Enkidu himself, in Gilgamesh saga, learns the existence of bread and beer by a woman’s teaching.

Mediterranean regions were the cradle of beer-making; but over time, starting from Georgia, wine-making practice developed. In early times it was a luxury item, aimed at satisfying social excellence. During the first millennium BC, it became more and more accessible to common

people, losing its former luxury status; the use of beer was abandoned (in the Middle Ages, we will find it turned into a “northern” drink, the daily drink for people living North European regions, where growing vineyard was not possible). Little by little, Mediterranean people became accustomed(I would say addicted) to wine, that conquered every possible space in social life. In a time when water itself was seen with a certain suspect, for it could be not very pure or even undrinkable, wine was seen as the one and only drink, generally mixed to water(this practice, while getting water more healthy, made it possible to drink a larger amount of wine, made itself lighter). Not by chance, the Latin word *miscere* means two different gestures(mixing; pouring a liquid) that were thought as practically coincident: you were never supposed to drink water or wine alone. So, any opportunity for drinking(not only at table, but everywhere, on any occasion) was celebrated with this precious fermented liquid. In Mediterranean culture, it had a similar role to that played by tea in Eastern Asiatic cultures.

Other fermented drinks, such as cider(made with fermented apples, or pears), hydromel(made with fermented honey) or the beer itself (that, time passing, was abandoned even in popular diet) did not have a significant success in Mediterranean history, as all space was occupied by wine.

Bread and wine(beer in former times) were only the “highlights” of the wide category of fermented products, that occupied a strategic role in Mediterranean diet since Antiquity. This category includeddairy products, cured meat, fish, vegetables.

Yogurt, sour milk, sour cream and butter were typical components of nomadic food systems in central Asia, but were part as well of eastern Mediterranean and European cultures, from Mesopotamia to Egypt, from Turkey to Bulgaria, reaching western regions through Greece and the Roman Empire.

However, the most important dairy product in Mediterranean regions was cheese. The historical roots of cheese-making have been found in the Fertile Crescent; on this tradition was closely founded Greek and Roman culture, related with sheep breeding, a main characteristic of Mediterranean economy (in ancient times, and so in the Middle Ages, at least until the 12~13th centuries, sheep milk was the one to be used for cheese). In the Middle Ages, cheese consumption was also promoted by ecclesiastical and monastic culture, because cheese (with fish and eggs) was intended as one of the main substitute products for meat, in Lent and abstinence days.

Besides sheep, pigs were the other kind of animals to be bred on a large scale. In this case, on a food perspective, the result was meat rather than milk. But in this case too, fermentation (with salting, sometimes smoking) was called into question immediately, in order to prepare sausages, salami, hams. Native to Mediterranean regions and culture, these foodstuffs were placed at the heart of daily consumptions.

Fish, as well as meat and dairy products, was submitted to fermentation process. An important base for Roman cuisine, the main sauce used at the time, was the fish-made sauce known as *garum*, prepared from fish entrails (or the entire fish) enriched with salt and herbs, then left to ferment for several days. This kind of sauce, similar to sauces still today used in East Asian countries, was intended as a substitute for salt (in ancient Roman recipes, when *garum* is suggested, salt is always lacking). It was still known and used in Europe during the Middle Ages.

Talking about a sauce, let's note that seasonings, condiments, flavors are a strategic point of food cultures, as they give that "touch of difference" that guarantees identity, making each culture specific to itself. Moreover, ancient and medieval dietetic culture assigned sauces a "functional" value, as they were supposed to "correct" or "complete" the nutritional qualities of the food they dressed.

Less important, in Mediterranean food history, have been the practices for fermenting legumes, profiting by the proteins content of the plants in order to obtain meat-like flavors and texture. Well experienced in Asian countries, exploiting soybeans or different pulses, this procedure does not seem to be present in Mediterranean culture– or perhaps we should say, it was never studied by historians.

For their part, vegetables were usually fermented. This happened (with the aid of salt and/or vinegar) to many sorts of plants: carrots, cucumbers, olives and so on. First of all cabbages, both because widely cultivated in kitchen gardens, and because especially suitable to be preserved as sauerkraut – moreover, because Roman physicians and dieticians ascribed this vegetable healthy and therapeutic values. This state of affairs remained in the Middle Ages, when medical literature still claimed the importance of cabbages for health, and they were the first and most important culture in every garden.

Fruits – mostly used for making alcoholic beverages, profiting by their sugar/acid components – were a further important chapter in fermented products' history. We already talked about wine and “minor” beverages such as cider.

Especially from wine was made vinegar, the product of a further fermentation in a fermented liquid. It was another “mark” of Mediterranean food system, largely used for cooking, seasoning and preserving. In all cases, vinegar's acidity was a very useful resource, almost a need for men and women who daily had to manage perishable foods. In many preservation practices, vinegar was intended as a basic complement to fermentation or salting. In cooking recipes, often mixed to sweet flavors such as honey, it was a “reinforcement” for meat or fish taste. Seasoning as well, required vinegar as the first ingredient for sauces (note, that ancient sauces, until the Middle Ages and the Renaissance, were not emulsified with fat ingredients, oil or butter, but were lean and acid). When raw salads, and any kind of fresh vegetables

were consumed, vinegar was perceived as an absolute need, in order to fight the perishable nature of food. In Latin language, the name for the whole salad family was acetaria, derived from acetum, vinegar. In other words, salad was named by its principal dressing, vinegar.

Talking about vinegar, we got a crucial topic in the history of fermented food. Until now, I have much insisted on the symbolic value of fermented products, as it seems to be an essential element for a cultural history of food. But obviously, these symbols are not purely theoretical; they have a very concrete base. As everybody knows, fermented foods and drinks have a basic value (a material, nutritional value) that guarantees nourishment, health, pleasure – the three main reasons why we eat, a fourth one being sharing, conviviality. Fermented products ensure a bio-enrichment of nutritional substance, adding health values and safety to food. They assure taste stability, avoiding taste to deteriorate. They improve and get better flavors, starting biochemical processes that produce “desirable changes” (Campbell-Platt). They induce a differentiation of tastes, a guarantee in itself of pleasure and variety. Most of all, they guarantee security. I left this benefit as the last one, as the most obvious and important: bio-preservation of perishable foods.

Fermentation, besides drying and salting, is the oldest and widely spread preservation method. And historically, food preservation has been in every society the first and most important concern and care for men. A concern, and a care, that in a sense we can define a challenge to Nature, to seasonality rules. The succession of seasons and food resources is a very nice, fascinating experience, but only if you have a full store-room. Only if you are not subject to the anxiety of knowing if there will be, or not, something to eat tomorrow. As an Italian sociologist wrote, “preserving is anxiety in its absolute state”. But it is also a bet on the future: “who would ever make preserves if he didn’t have the hope of living at least long enough to be able to eat them?”. Anxiety and hope. Knowledge and practices related with fermentation

have historically increased security. Safety and security at a time.

This way told, our history would look like a simple history of need, originated by safety and security need. Yet, we already said that salted, smoked, fermented food are able to procure health and pleasure – and conviviality, when shared with other people. But other plus-values, making the matter much more complex and interesting, have to be taken into account.

Preserved food not only guarantee a full store-room. They are perfectly suitable for traveling. Therefore, they work not only in a subsistence, self-consumption logic, but virtually incorporate an extraordinary potentiality for becoming, in some way, “global” products, directed to commerce, made for market.

In Mediterranean history, cured meat and cheeses – as well as wine, or garum – have been since Antiquity the object of a wide range commerce, that crossed the sea in all directions, from East to West, from South to North, already in early Greek times. This was even more emphasized when Roman Empire politically unified the Mediterranean sea, transforming it in a sort of internal lake, that the Romans themselves called *mare nostrum*, “our sea”. So, familiar production and domestic traditions developed into commercial business. For example, garum was produced on a scale that we would call “industrial” in many places along the coasts of Spain, and the Adriatic coasts of Balkan peninsula. Several qualities of garum existed, more or less fine; the finest were particularly esteemed on the market. Spanish garum, made with mackerel, was renowned everywhere. This kind of fermented fish sauces kept on being traded until the Middle Ages. In 9th century, one could buy it in Genoa port, Italy: an inventory of the time show monks coming from the Apennines region, hundreds of kilometers away, to buy there the precious liquid. In the eastern part of the Mediterranean, where a part of the Roman Empire still survived (its capital was Constantinople, today Istanbul), Roman food traditions were strongly maintained, and the Emperor’s table was “soaked of fish liquid”, as a

western diplomat told, after visiting that court.

After the Middle Ages, garum is no more attested in European markets and tables. But preserved(often fermented) fish is still a relevant item, as we can see in market records and cookery books. The most celebrated of these books in Renaissance Italy was Bartolomeo Scappi's *Opera*(Work), dating 1570. He gives detailed instructions on how to get preserved fish on urban markets in Venice, Milan, Genoa, Rome. He talks about carpione and scapece(the main methods for preserving fish, frying it then adding vinegar, or the contrary, anyway starting a fermentation process). Scappi talks about "various kinds of salted fish, preserved in leaves, either smoked, air-dried or stored in brine": among these are Lake Garda carpioni, which "can be preserved for several days and can be transported to different places throughout Italy", as well as many fishes from other lakes and rivers. Instead, when preserved in oil, fish was mainly intended for local consumption.

Salami and sausages as well, and cheeses,were items for the luxury market(also for the luxury market). In Roman times, sausages from Lucania region(South of Italy) were particularly esteemed, so as to become the name of sausages for excellence: *lucaniche*, *luganeghe* is still today a name for them. Some vegetables too – not surprisingly, mainly cabbages – were famous at the time: *Ariccia* cabbages(a village not far from Rome) were known for their narrow leaves; *Bruzio* cabbages(a region more South) had big, spicy leaves; *Cuma*, *Pompei* were other places for producing excellent cabbages. We can figure a special market for these products, often fermented when sold far away from their native place.

Cabbages, either fermented or fresh, remained the main vegetable product in the Middle Ages. In Renaissance Italy, cabbages from Milan or Bologna countryside were the most widely commercialized on a long distance. The most important Italian cookbook of the 16th century, written by the already recalled Bartolomeo Scappi, mentions pickled cabbages coming from German regions(*sauerkrauten*) that one could buy on Venetian market.

Let's go to a conclusion. Fermented food (and more generally every kind of preserved food) enjoys a very special feature: it belongs to two worlds at the same time, hunger world, and luxury world. Fermented food is the main instrument for ensuring some security to peasant society. Fermented food is the main object of "fine" food trade.

This contradiction, sometimes appears dramatically evident. Always, in medieval literature, fermented foods as cheese or cured meat (mainly pork) are represented as "typical" of peasants' diet, opposed to fresh food, a privilege of the upper classes diet. "Bread and cheese" appear as the very symbol of a "poor" diet. Moreover, cheese and cured meat are an ideal food for traveling people: they always appear in the pilgrim's bag, accompanying bread (that's the meaning of the word *companionico*, "going with bread", used still today in Italian and the other Neo-Latin European languages).

At the same time, cheeses and cured meat appear on urban markets, attended by the well-to-do. In the 15th century, an Italian scholar called Pantaleone, professor of medicine in Torino University, wrote the most ancient European work on dairy products, browsing what he thought to be the food excellence to be bought in Italy, France and other countries. In 16th century, another Italian scholar, the Milanese Ortensio Lando, wrote a sort of gastronomic guide of Italy, addressing to an hypothetical Eastern traveler a list of the best specialties to be tasted in each place along the country. Not surprisingly, they are mainly preserved-fermented foods: salami, sausages, cheeses, wines, breads, oven products.

These are the historical roots of what today we call the "gastronomic heritage of Italy", that is, the large set of "typical products" that characterizes our regions, towns, villages. The extraordinary variety of these products (the main reason of reputation of Italian gastronomy in the world) is based on geographical differences, but even more on local choices and knowledge, different ways of "inventing" fermented products.

I propose an observation starting just where I stopped my speech. I tried to explain that the whole “gastronomic heritage of Italy”, formed by a large set of “typical products” of different regions, towns, villages, owes much to fermentation practices. In fact, the extraordinary variety of these products (the main reason of the reputation of Italian gastronomy in the world) is based on geographical and historical differences, and different ways of “inventing” fermented (and other) products.

Now, let's pay attention: the idea of a “typical”, “local” product may exist only if connected with trade and exchange practices. The very identity of a “typical” product is related to its commercial circulation. Nobody would call a cheese “parmigiano” (that is, “originated in Parma”) if it were eaten only in Parma. Nobody would call a sausage “mortadella di Bologna” (or even “Bologna”, a world-wide name for “mortadella”) if it were eaten only in Bologna. When we give a product a local name, we assume that it is bought and consumed out of its production place.

That's why I find too restrictive such expressions as “traditional fermented foods”, or “ethnic fermented foods”, often used in scientific literature when debating about these topics. Actually, fermenting practices are traditional ones, elaborated in a domestic sphere, transmitted (often orally) from generation to generation, mainly in a female line, from mother to daughter. Actually, they are “ethnic” practices, that assume very different shapes and tastes in each country, in each community. All over the world, more than 5 thousand different products have been surveyed, that in some sense can be qualified as “fermented”. However, the differentiation of shapes and tastes is the actual secret for the commercial success of these preparations – even “global”, to some extent.

To some extent. We cannot presume a world-wide trade for all single local specialties, but, for example, the planetary success of “parmigiano” (interpreting the historical gastronomic heritage of a little region of northern Italy, around the city of Parma) shows that the contrary can sometimes happen. Let's analyze the phenomenon more

closely: why this one, and not other kinds of cheese got such a success in the world? And before, in all Europe? And before, in all Italy?

What really happened in this story, we cannot understand if we do not realize that a gastronomic and commercial success is not related exclusively to the individual qualities of a product, to its own individual excellence. The foodsystem must be called into question: in which context the product is used, what matches it, or it is matched to. I always remember Fernand Braudel's advice: a food historian should never study single foods, but food associations(in the same way as botanist do not study single plants, but plant associations). In our case, the gastronomic system inside which the products are used. The "culinary grammar" they share, giving each of them a sense(in the same way as single words get a meaning inside a language with associate them according to precise rules).

In Italy, as well as in Europe, as well as in the world, parmigiano's success is connected to its main function in the gastronomic system, as a cheese to be grated. In Italy, mainly grated on pasta. The combination pasta-cheese(since the Middle Ages, until 19th century, the one and only way to season pasta) was a decisive reason for the success of this cheese. Elsewhere, not only pasta but, more generally, the success of Italian cuisine supported the success of parmigiano.

This is but an example, but, I think, highly significant. You never sell, you never export a product; you sell, you export a model, an idea, a system of cuisine. Not a flavor, but a system of flavors. We should always recall Jean-Louis Flandrin's teaching, when inventing the phrase "taste systems". Taste is a system. Products do not walk alone.

Seen from a western perspective, taking into account the history of Mediterranean food culture, kimchiology – that is, the study about Korean fermented food and the possible way to get it "global" – is going to develop a wider knowledge and a wider consumption of this product, only if the "Korean model" as a whole, as a system will be spread. Not only kimchi, but the foods that go with it. I say it again: products do not walk alone.

Comparison of Uniqueness of Kimchi and Other Fermented Foods Representing the East and the West

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Pickled Foods for Preservation

Kimchi is considered as tsukemono(漬物, つけもの) in Japanese and a type of pickles in English. Tsukemono or pickles broadly refer to fruits, meat and fish as well as vegetables preserved in salt or vinegar.

In Europe, raw sardines and garlies were salted and soaked in vinegar for preservation, which are considered as pickles today.

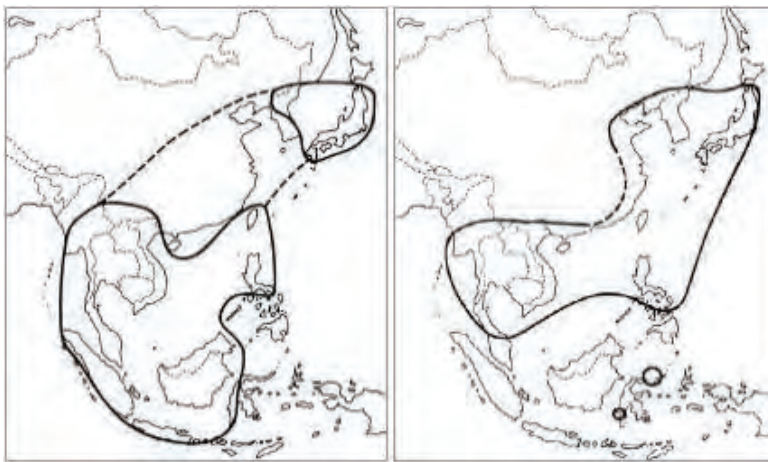
In the narrow sense, tsukemono or pickles refer to preserved vegetables and fruits like cucumber and olives. In Japan, the foods like sikhae(食醃) of Korea described below are broadly classified as tsukemono, while tsukemono in the narrow sense refers to vegetables preserved in solutions with salinity.

Some types of tsukemono are made without using salt, but most of tsukemono is made by using salt or solutions with salinity. Tsukemono has been developed to preserve foods for a long time since mankind used salt. Ever since, mankind has gained the ability to have wild plants or cultivated plants harvested in specific seasons or fish caught in a large amount in a limited period of time when they are not in seasons. The fermentation reactions are made during the period of preservation, and many types of tsukemono are made to add the flavors of fermented foods.

In order to academically organize diverse cultures related to tsukemono, developed across the world, types and recipes of tsukemono of the world need to be systematically arranged, based on the results of the scientific classification. However, such attempts have not been made yet.

Fish tsukemono

As this seminar is themed “kimchi,” the scope of this paper is limited to preserved vegetables, and I would like to briefly introduce the fermented fish of East Asia before elaborating on preserved vegetables. The unique fish tsukemono of East Asia and East Asia is called sikhae(食醃)=sikhae(食醃). In Korea, it refers to foods made by salting and fermenting fish in rice or cooked millet, malt cayenne pepper. This can be considered as fish kimchi. Similar foods existed in China in the past, but they are now forgotten. Now only minorities living in the southwest of China are having them, but they are widely used in Southeast Asia and Japan.



<Chart 1> Distribution of Sikhae

<Chart 2> Distribution of Jeotgal

※ Dotted lines show areas where Skhae and Jeotgal existed in the past.

Jeotgal of Korea refers to preserved fish and shells in salt. Fish meat is partially broken down by amino acids, due to enzymes contained in ingredients, to be a paste or a liquid. It is called shiokara(塩辛) or eojangyu(魚醬油) in Japan, and China and Southeast Asia where rice has been cultivated for a long time have similar foods.

What makes kimchi unique among pickled vegetables of the world is that kimchi is made using cayenne pepper and jeotgal, which contains amino acids such as glutamic acid that make foods savory. As capsaicin of red peppers in kimchi prevents spoiling of jeotgal, kimchi can be tsukemono with the savory flavor.

It is assumed that the origin of sikhae and jeotgal is the freshwater fish preservation technique, which was used in the early rice cultivation period, and that sikhae and jeotgal have spread with the rice cultivation culture to various regions.¹

Vegetable tsukemono

Tsukemono has been developed to preserve foods for a longer period of time. Tsukemono is one of the preservation techniques allowing people to have foods that are harvested or caught in a limited period of time when they are not in seasons.

The oldest vegetable preservation technique is to dry vegetables. Vegetable tsukemono has been made in areas where salt is widely used. Vegetable tsukemono is made to prepare for winter when fresh vegetables are not available. In particular, vegetable tsukemono is made in snow-covered zones, where vegetables cannot be supplied when the lands are covered with snow, in winter.

The area with the tradition of making a large amount of tsukemono in Japan is Dohoku(the northeastern part of Japan) which is a snow-covered region. The area had the tradition of making a large amount of vegetable tsukemono in the period from early summer to autumn, when vegetables are harvested, at home. Not only cultivated vegetables but also tender leaves or sprouts of wild plants picked in mountains



1_ Written by Ishige Naomichi(石毛直道) and translated by SB Kim,

『The study on Eojang and Sikye - Traditional Cultures of Monsoon and Asia - Soohaksa』, 2005.

and fields were preserved in salt. Vegetables made into tsukemono were used as they were, and also used as ingredients of other foods like nimono(煮物, にもの) for meals in winter.

One of wild plant tsukemono is bamboo sprout tsukemono, which is used in the area from the southwestern part of China to the Indonesian peninsula. Grown bamboos are not edible as they are too hard, but bamboo sprouts.

With the unique texture are edible. Bamboo sprouts, which can be picked in a limited period of time, are processed into tsukemono through fermentation using lactic acid. This food which can be enjoyed around the year is called “Zhusun(筍絲, メンマ)” in Chinese.

Fermented Saltless tsukemono

Most of vegetable tsukemono is fermented using lactic acid to prevent spoiling with salt, and is made into preserved foods with salty and sour flavors.

However, there are a few types of tsukemono made without using salt in the world. In Nepal and Butan, they have gundruk, which is tsukemono made by crushing and fermenting vegetables in a pot buried underground for days without using salt. Kiso in Nagano, Japan, has sunki tsukemono(すんき漬け), which is fermented leaves of sunki without using salt. Sunki is a type of a radish. When it was first made, crushed local fruits like *Malus toringo*, *Malus tshonoskii* and *Vitis coignetiae* were used to facilitate fermentation. Sunki tsukemono is made by boiling sunki leaves or stems, mixing them with crushed fruits and pressing the mixture with a heavy stone for days. When fermented, some sunki tsukemono is dried and preserved until winter of the following year to facilitate fermentation.

Sunki tsukemono is edible as it is, and it is also heated to make soups. There is no rock salt and salt is made of seawater in Japan. Kiso is

located in mountain areas, which are far from the coasts, so salt was very rare in Kiso in the past. That was why tsukemono in Kiso areas was made without using salt.

Both gundruk and sunki tsukemono have strong sour flavors, as they are fermented using lactic acid.

There is a record about saltless chimchae(無鹽 沈菜) in 『*Yorok*(要錄)』, the old recipe book of Korea. In Myanmar, there is lapetso, which is tea tsukemono made by putting steamed tea leaves in a bamboo container, pouring water and fermenting them for a long time without adding salt. Yunnan of China and Thailand have similar tea tsukemono.

Vegetable tsukemono is a food developed in the civilized areas of Eurasia and spread to adjacent areas. In general, those who do not cultivate crops and get foods by hunting, collection and nomadic life have no tradition of making vegetable tsukemono. In addition, natives in Americas before Columbus, Australia and South Pacific islands did not have the food culture of making vegetable tsukemono.

As you are well aware of kimchi, this paper provides a brief overview of vegetable tsukemono of parts of the world other than Korea.

Europe

Tsukemono of Europe is broadly divided into two types: fermented tsukemono and tsukemono made by using vinegar.

Fermented tsukemono is represented by sauerkraut, which means a sour cabbage.

Sauerkraut, which is tsukemono with a sour flavor made by finely chopping cabbages and adding spices and salt of 23% of the weight of cabbages for lactic acid-based fermentation, is usually heated rather than being used as it is. It is popular in Alsace of France, Northern Europe, Eastern Europe and Russia as well as Germany.

Pickles are made by salting vegetables like cucumber, remove remaining salt and soaking the vegetables in water with spices, vinegar or sugar added. Pickles are used without being heated. Some fermented pickles are made by using brine with salinity of 10% or below. These

pickles are fermented due to lactic acid, and gain a sour flavor although vinegar is not used.

It is also said that pickles made by using vinegar have been transferred from the Middle East to Europe in the ancient times.

Acar

Vegetable tsukemono is called acar in India, Nepal, African areas on the Mediterranean shores, the Middle East and Central Asia. It is told that acar is a term originated from Persian.

Acar of India is divided into finely chopped vegetables and fruits like mangoes preserved and fermented using spices like pepper and garlics, salt and mustard oil to add a sour flavor; and tsukemono made by using vinegar or lemon juice without fermentation. Acar made by adding an artificial sour flavor is more widely used. Acar is usually used without being heated as a side dish of curry.

Southeast Asia

Acar made by using vinegar is used in Malaysia, Indonesia and the Philippines. Acara or atsara, which is popular in the Philippines, is made by pickling unripe papaya in brine and soaking it in water with spices, sugar and vinegar added. tsukemono with a sour flavor called acar in Southeast Asia is assumed to be transferred from India through trade in the Bay of Bengal.

In Japan, tsukemono made by putting salt, vinegar, liquors, sugar and pepper in water, boiling and cooling down the water and pickling chopped vegetables in the water is called atsara tsukemono(アチャラ漬). Atsara is a term originated from acar. It is assumed that acar has been transferred by Portuguese who came to Japan through Southeast Asia in the late 16th century and the early 17th century.

Vegetable tsukemono is popular in Thailand and Myanmar among Southeast Asian countries. Vegetables are picked in a solution with a sour flavor, made by adding salt to thin rice soup or water used to wash rice and leaving the solution for two or three days at the room

temperature for lactic acid-based fermentation.

China

Tsukemono has been developed in China since the ancient times. Traditional tsukemono of China is broadly divided into “xien chai(鹹菜)” pickled in salt, “xuan chai(酸菜)” made through fermentation using lactic acid, “jang chai(醬菜)” made using jang, which is the sauce of China and “tangchutzu chai(糖醋漬菜)” pickled in sweet vinegar.

The representative xuan chai is Chinese cabbage xuan chai, which is made in Northeastern China through fermentation using lactic acid. This is a food which is the origin of kimchi. Jang chai is tsukemono of China, and it became jangajji in Korea and misotsuke(味噌漬) and shoyutsuke(醤油漬) in Japan. Rakyo sweet vinegar tsukemono, which is popular in Japan, is a type of tangchutzu chai.

Hanzu(漢族, Chinese people) has cooked foods instead of raw foods since the Yuan period.

Accordingly, vegetable tsukemono is currently used for preservation of ingredients rather than for using it without processing.

Japan

Vegetable tsukemono is an important side dish of the traditional Japanese table, and rice had to be served with tsukemono. Koreans and Japanese love tsukemono most in the world. It might be different according to the counting system, but it is said that there are 500 to 600 types of tsukemono in Japan. The oldest record on vegetable tsukemono of Japan was written in the 8th century. There were “shiotsuke(塩漬け, tsukemono in salt)”, “hishiotsuke(醬漬け, ひし おづけ)” which is similar to jang chai of China, “Katsutsuke(粕漬, か すづけ)” which is vegetables pickled in suljigemi, the by-product of Japanese traditional liquors, and “Nukatsuke(糠漬, ヌカヅケ)” to be described below.

Nukatsuke is tsukemono uniquely developed in Japan. It is tsukemono made by adding brine to rice bran, which is a by-product of the rice polishing process, fermenting the solution using lactic acid to make a

paste, and adding salted vegetables. Takuan(澤庵, タクアン), which is nukatsuke of dried radishes, and ume boshi, which is made by adding perilla frutescens var. crispa to Japanese apricots to turn them red, adding salt and drying. Ume boshi(梅干し) with a strong sour flavor represents tsukemono of Japan.

Most of tsukemono used at home of Japanese was home-made until about 1960. Ever since, products manufactured at tsukemono plants became popular, and Japanese rarely make tsukemono at home except for asatsuke(浅漬, アサヅケ), which is completed in two or three days.

As yakiniku(焼き肉) of the Korean style gained popularity in Japan in 1960s, Japanese began using kimchi. As Japanese use more meat or fat for cooking, kimchi became more popular. Currently, a lot more amount of kimchi is consumed than takuan, the traditional tsukemono of Japan. Kimchi takes one third of the production volume of tsukemono in Japan, and kimchi is partially imported from Korea. Japanese became kimchi eaters, following Koreans.

Areas Where tsukemono Is Popular

There is no data available for international comparison of tsukemono consumption volumes, but I concluded that vegetable tsukemono is most widely used in East Asia and Southeast Asia, especially the Indonesian peninsula. The staple food of these areas is rice, and vegetables took a large share of foods due to the absence of the ranching.

Fermented fish like jeotgal and red peppers, which are often used to make kimchi, are widely used in Southeast Asia, so it is likely that Southeast Asian people will easily accept kimchi. It is probable that kimchi will come into wide use in Southeast Asia.

Kimchi's Global Journey from Saigon to London

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Nowadays kimchi is widely known worldwide and available for purchase at specialist stores in major global metropolises. The data on the international kimchi trade (Chart 1) indeed suggests that, along with being Korea’s national dish, kimchi has by now turned into a globally traded commodity. Exports of kimchi manufactured in China which have been growing dramatically during the last ten years, provided an additional boost to its global success(Lee 2014).



Chart 1: Korea's kimchi trade (source: Lee 2014)

An important milestone in kimchi's global journey is the recent inscription of 'Kimjang, making and sharing kimchi in the Republic of Korea' on the list of Intangible Heritage of the Humanities by the United Nations Educational, Scientific and Cultural Organization (UNESCO). As the description on the UNESCO website explains 'the collective practice of Kimjang reaffirms Korean identity and is an excellent opportunity for strengthening family cooperation'.¹ Yet, as recently conducted surveys indicate, the practice of kimjang – once a standard chore performed at every household – is gradually declining, as more and more Koreans eat out or rely on store-bought produce (Lee 2011). Moreover, it is industrially produced kimchi, rather than the home-made version, that is responsible for the global advance of kimchi. In this paper, I will roughly sketch the different stages of kimchi's global journey, from the first shipments of canned kimchi for Korean soldiers in Vietnam to the popularization of kimchi in Japan and, finally, the role of kimchi within the Global Hansik campaign.

1. Saigon

Joseph Heiser begins the eighth chapter of his study of the US military logistics during the Vietnam War with the following paragraph:

U.S. soldiers in Vietnam ate well. Ice cream and eggs to order were not uncommon items at fire support bases. Extensive use of large refrigerators, refrigerator vans, and helicopters permitted troops in the field to enjoy garrison type rations on an almost routine basis. Naturally these conditions were not available in 1965, but grew as logistics units arrived and facilities were established and improved (Heiser 1991: 198).



1_ 'Kimjang, making and sharing kimchi in the Republic of Korea',
<http://www.unesco.org/culture/ich/RL/00881> (accessed 8 September 2014).

In order to ensure a reliable supply of ice cream and other dairy products, three recombining milk plants were built in Vietnam, the first one in December 1965, followed by another two in the autumn/winter of 1967-68. Additional, small-size ice cream plants were brought into the country to provide ice cream as far forward into the front as possible. There were as many as 40 of them by the turn of the decade. A network of reliable refrigerated transport and storage was absolutely crucial for the subsistence logistics in this hot climate, but was not achieved before 1970(Heiser 1991: 199-200).

Next to refrigeration, the biggest problem for the logistical subsistence support services were the special adjustments required for feeding the Free World Military Forces(FWMF), which comprised non-American soldiers. Their strength oscillated between 60,000 and 70,000 men. Roughly two-thirds of them were South Korean(Larsen and Collins 1985: 23). The food supply for all of these soldiers was to be paid for by the US Department of Defence.

Table 1. ROK troops in Vietnam(1964-1972)

	Total	Regular troops					Misc.
		Total	Army	Navy	Airforce	Marines	
1964	140	140	140				
1965	20,541	20,541	15,973	261	21	4,286	
1966	45,605	45,605	40,534	722	54	4,295	
1967	48,839	48,839	41,877	735	83	6,144	
1968	49,869	49,838	42,745	785	93	6,215	31
1969	49,755	49,720	42,772	767	85	6,096	35
1970	48,510	48,478	41,503	772	107	6,096	34
1971	45,694	45,663	42,345	662	98	2,558	31
1972	37,438	37,405	36,871	411	95	28	33

Source: Ministry of Defense, Kunsu p'yŏnch'an yŏn'guso, *Pŏhnam chŏnjoeng-gwa Han'gukun* (Seoul: Ministry of Defense, 2004), p. 196.

The National Archives in College Park, Maryland, reveal an interesting correspondence that took place between the US Department of Defence and the Republic of Korea government concerning the extra costs of the kimchi ration for South Korean soldiers fighting in Vietnam. The negotiations began in 1967, at a time when the Korean manpower in Vietnam was about to reach its peak of nearly 50,000 troops(see Table 1). It was estimated that providing each soldier with a Korean-manufactured combat ration instead of a standard US combat ration once a day would require a budget of twelve million dollars per year. The second option considered was the procurement of Korean-made kimchi rations for insertion into the US-manufactured C-rations, as a supplement to the US standard ration. The budget required for this operation would be much smaller, namely 2.5 million dollars, and a decision was made in favour of this latter option(Barnett 1967). The issue was rather delicate, as the Department of Defence, which was to pay for the kimchi rations, was experiencing financial difficulties at the time, while President Johnson has given his personal endorsement to the Korean request for a kimchi ration. It was, therefore, crucial to reach an agreement before the White House would interfere, which might have resulted in an even greater financial burden. The financing of the whole operation remained a problem for years to come(Nooter 1969, Lathram 1970).

A glance into the Korean media provides us with a little bit more background information for understanding the pressure behind the kimchi negotiations between the US Department of Defence and the Republic of Korea government, as recorded in the archival correspondence. The kimchi issue featured for the first time in July 1965, when it was reported that the American authorities had declined a Korean request to provide Korean soldiers in Vietnam with special rations(Chosŏn Ilbo, 9 July 1965, p. 2). This year marked the beginning of the deployment of a sizeable number of Korean soldiers in Vietnam (see Table 1). In May the following year, Chosŏn Ilbo reported that Korean soldiers in Vietnam craved for kimchi(Chosŏn Ilbo, 12 May

1966, p. 2), and by the end of the year, the first private initiatives for shipping canned kimchi to the Korean boys in Vietnam occurred (Chosŏn Ilbo, 20 September 1966, p. 8, and 23 December, p. 4). A short article, featured in May 1967, critically reported on the fact that Korean soldiers in Vietnam had to pay 35 cents for a can of kimchi manufactured in Hawai'i (Chosŏn Ilbo, 12 May 1967, p. 4).

South Korean soldiers deployed to Vietnam were the first consumers of factory-made (canned) kimchi, followed, during the 1970s, by Korean construction workers in the Middle East (Han 2010: 164). However, the kimchi-processing industry only truly began to thrive after the Korean pickle was embraced by Japanese consumers in the 1990s.

2. Tokyo

Japan is an important market for Korean products, but at the same time a fierce competitor in the quest for global culinary recognition. The colonial legacy does not make the relationship between the two countries any easier but, despite antagonisms, the popularity of Korean food and drink in Japan since the 1980s has played an essential role in the rising consciousness among Koreans that their native fare may be attractive to foreigners.

Older generations of Japanese encountered Korean food in the form of yakiniku (grilled meat). Before the economic boom of the 1980s, Korean-style barbecued meat was the prevalent form of meat consumption among the Japanese, and yakiniku remains one of the most popular meat dishes in Japan. Until the 1990s, the popularity of kimchi fell far behind that of grilled meat, as its pungent taste did not agree with most Japanese palates and the strong, garlicky odour of the pickle was not socially acceptable, especially on the breath of its eaters. The mid 1990s marked a watershed in the Japanese attitude toward kimchi: its production in Japan increased nearly fourfold, while its

importation from Korea increased nearly tenfold: from 3,432 to 30,000 tons. By 2000, kimchi ranked as the number one among all the pickled vegetables produced (and consumed) in Japan, far ahead of traditional Japanese-style pickles (Cwiertka 2006: 153).

The skyrocketing popularity of kimchi in Japan had a critical impact on the South Korean kimchi market, as it stimulated the growth of the commercial production of kimchi in South Korea. Today most restaurants and catering services in South Korea rely on industrially processed kimchi, as do the majority of urban consumers.

Like the manufacture of soy sauce (kanjang), soybean paste (toenjang) and red-chilli-pepper paste (koch'ujang), for centuries kimjang was strictly a homemade affair. Preparation methods and flavour varied considerably by region, and each family had its own recipes handed down from generation to generation. Producing and consuming homemade condiments created a bond among family members. The gradual shift from homemade to factory-made kanjang has powerfully affected the taste of Korean food: the distinctive flavours of household soy sauce have become uniform, while industrial methods resulted in products that differed in taste and aroma from traditional kanjang (Cwiertka 2012). Similarly, the commercialization of the production of kimchi resulted in the standardization of its flavour. Since, at the beginning of the industrialization process, most kimchi factories were located in the vicinity of Seoul, the flavour produced in this area has become the commercial, 'national' kimchi standard. Han goes as far as to argue that the commercialization of the kimchi production has reinforced the 'consciousness of Koreans that they comprise a single ethnic group' (Han 2010: 140).

Thus, the successful reception of kimchi in Japan aided its rapid transformation into Korea's 'officially sanctioned' national symbol. Moreover, it was Japanese attempts to capitalize on the manufacture of kimchi that inflamed Korean claims to its 'ownership'. This dispute, commonly known as the Kimchi War (kimchi chŏnjaeng), began in 1996 when Japan proposed to designate kimuchi (the Japanese pronunciation

of kimchi) as an official Japanese food at the Atlanta Olympics. At this point, Japanese–Korean trade relations were already under stress because Japan was exporting a Japanese ‘instant’ version of kimchi that lacked the distinctive flavour derived from the fermentation process. In response, South Korea filed a case with the Codex Alimentarius Commission(CAC), part of the United Nations Food and Agriculture Organization, arguing for the need to establish an international kimchi standard.² In September 2000 the 20th Session of the Codex Committee on Processed Fruits and Vegetables advanced the Draft Standard for Kimchi for final adoption, which took place on 5 July 2001. The decision was interpreted by the Korean press as a failure on the part of Japan to challenge Korea with its poor kimchi imitation. However, as Han(2010: 143) explains, the accepted standard was not exactly a Korean victory, but rather the product of lengthy negotiations between Korean and Japanese officials that began in 1997.

3. London

At the venue of the Korea Food Expo of 2008 the South Korean Minister of Food, Agriculture, Forestry and Fisheries announced the ‘Global Promotion of Korean Cuisine’(Hansik Segyehwa Ch’ujin) Campaign, a government-led initiative which aimed to turn Korean food(hansik) into one of the five most popular ethnic cuisines in the world by 2017. The campaign took off at full speed in 2009, coordinated by the Korean Cuisine Global Promotion Team(Hansik Segyehwa Ch’ujindan) with the wife of South Korean president Lee Myung-bak as its honorary chairperson. Although not a government body per se, the promotion team was densely populated by high-ranking South Koreans who frequently issued public statements concerning



2_ ‘TED Case Studies: Japan Korea Kimchi Dispute’, American University, <http://www1.american.edu/ted/kimchi.htm>(accessed 2 October 2014).

concrete initiatives to be undertaken, as well as the allocated budget.

In the public statement issued in the spring of 2009, the Minister of Food, Agriculture, Forestry and Fisheries identified the chief strategies of the campaign toward refurbishing Korean cuisine and attracting overseas consumers, clearly situating restaurants as cultural centres and cooks as diplomats promoting the ‘Korean brand’.

An issue that from the very beginning assumed a central position in the promotional activities surrounding Korean food was the definition of the Hansik territory. Contrary to the Japanese cuisine, which globalized clearly with sushi as its key player, there was no clear consensus about which dishes should enter the pantheon of Korean cuisine. For example, the website ‘Food in Korea’, launched in 2008 by the Korea Agro-Fisheries Trade Corporation, identified a ‘Korean Food Top 10’, which included kimchi, pulgogi, pibimpap, naengmyŏn, samgyet’ang, chapch’ae, sinsŏllo, ttŏk and hankwa, and two broader categories of drinks. A slightly different Top 10 selection, composed by the promotional website of the Korea Tourism Organization, mentioned kimchi, pibimpap, ‘traditional Korean dishes of the royalty’, kalbi, pulgogi, samgyŏpsal, samgyet’ang, naengmyŏn, ‘seafood dishes’ and ttŏk. It is not entirely clear who made these selections and on what grounds, but kimchi clearly ranked first in all of them.

On 17 March 2010, the task of spearheading the efforts toward globalizing Korean cuisine was entrusted to the Korean Food Foundation(KFF, Hansik Chaedan), which had been especially set up for this purpose with donations from the Korea Tourism Organization, the Korea Agro-Fisheries Trade Corporation(Nongsu Sanmul Yudong Kongsŏ), the Korea Foundation(Hanguk Kukche Kyoryu Chaedan), the National Federation of Fisheries Cooperatives(Susanŏp Hyŏptong Chohap), the National Agricultural Cooperative Federation(Nongŏp Hyŏptong Chohap), the Korean Food Research Institute(Hanguk Sikp’um Yŏnguwŏn) and the Korean Racing Authority(Hanguk Masahoe).

The strategists behind the Global Hansik Campaign consciously communicated the image of Korean cuisine as healthy food. This health factor was symbolically confirmed by the ‘sperm-count experiment’, one of the very first projects launched by the Korean Food Foundation after its inception in March 2010. The experiment was undertaken with the objective of demonstrating the health benefits of Korean food, and involved counting the sperm collected from two groups of men, with one group eating only Korean food, the other only foreign food, for a little over one month. ‘The sperm count of a man in his twenties who lives in the city eating a predominantly meat-based Western diet was comparable to that of a country dweller in his fifties whose diet is mainly composed of Korean food’, explained the chairman of the foundation, Chung Woon-chun, in a cover story for the Korea IT Times. He concluded by remarking that these results demonstrated the excellent health benefits of Korean food(Kim 2010).

Similarly to earlier promotional campaigns for Korean food abroad, the emphasis on health relies heavily on the health qualities attributed to kimchi. For example, during the 1990s kimchi was embraced in Japan as a ‘wonder food’ that had the ability to increase stamina, prevent cancer, and even generate weight loss(Cwierka 2006: 154). Health is also a chief concept behind the branding of the international restaurant chain Bibigo, managed by CheilJedang(CJ), Korea’s highly ambitious number-one food and bio business. The first Bibigo outlet was opened in May 2010 in Seoul, and in the autumn of 2010 CJ Foodville officials projected the opening of 15 Bibigo restaurants in the US, China, Japan, and Southeast Asia by 2011; 38 by 2012; 139 by 2013; and 500 by 2014. By 2015, 1,000 outlets were scheduled to be up and running around the world(Garcia 2010). Although this ambitious plan has not yet materialized, Bibigo is on its way to acquire a foothold in the highly competitive ethnic restaurant market in London.³



3_ www.bibigo.com

The first London Soho store opened in September 2012, and only a year after its arrival the restaurant has made it into the Michelin Guide London. The opening of the second store is scheduled for December 2014. Faithful to its slogan 'Healthy & Fresh Korean Food', Bibigo points to fermentation as the essential secret behind the taste and nutritional qualities of the food it serves, and its menu is indeed distinctively light in comparison to most other Korean restaurants operating in London. The restaurant proudly explains on its website that it uses its own kimchi and fermented pastes and sauces in the dishes it serves. Half a century after canned kimchi from Korea was shipped to Korean soldiers in Vietnam who were hungry for the taste of home, the food processed in Korea now travels to satisfy the appetites of non-Koreans who are eager to explore novel tastes and exotic experiences.

The Future and Communication of Kimjang in the IT era

-Based on the Encyclopedia of the Korean Head
Families' fermented foods

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Naver Corp

1. Foreword

Culture is derived from the Latin word ‘cultus’ meaning ‘cultivating’, ‘growing’, ‘taking care of one’s heart’, or ‘intellectual development’. The term ‘culture’ encompasses all the learned and transmitted thoughts and behavioral patterns that are unique to a race or tribe of human beings. Some examples are food, clothing, housing, language, customs, religion, knowledge, arts, and others. In other words, all the things learned and handed down to the members of their society.

For example, Kimchi is a Korean food. It is made of preserved and fermented vegetables mixed with indigenous Korean ingredients, such as red pepper powder, garlic, salted fish, and various types of seafood. It first appeared in the Korean diet about 760 years ago. It is not only a food found in historical records, but also today, it is enjoyed and included with all Korean meals. A practice that seems it will continue well into the future.

A unique Korean tradition is Kimjang, the making of Kimchi in the winter. Since Kimjang is such an important part of Korean's identity, this traditional practice was designated by UNESCO as an Intangible Cultural Heritage of Humanity in 2013. Kimjang is an example of a community's cooperation, in a broader sense these communal ties are rarely found in modern society. Making Kimchi together, sharing in the making, and eating of it, especially in winter, is a Korean tradition that shows Korean's 'identity' and their 'community spirit'. Each household's recipes and their choice of local ingredients and quantities used are unique to each family or region.

Communication Kimjang – 'Cultural communication' is a term from functionalism anthropology meaning a social unit's (such as a nation, race) unique social knowledge, symbolic order, or communication pattern that has been transmitted over generations. In the past, the cultural communication of Kimjang was done in a way that those with more knowledge and experiences with Kimjang taught what they knew to their younger family members, relatives, and people they knew. Kimjang has been orally transmitted for generations among women. Recipes, ingredients, and preservation methods of Kimchi were passed down through these experiences of family members and relatives. Kimjang is an example of an informally transmitted culture.

This type of oral communication of a culture worked well in the past when large families lived in small community villages. However, it is worth serious thought to explore whether or not Kimjang could continue to be an appropriate communication method of Korean culture and heritage in our modern society, where urbanization and nuclear families are prevailing.

Kimjang was designated an Intangible Cultural Heritage of Humanity by UNESCO that officially recognizes the value of Kimjang on an international level. To some extent, the tradition of families and relatives making Kimchi continues today. However, in everyday life, Kimjang is fading away due to the growing number of nuclear families, an increase in households with only one or two people, apartment

living, life style changes, and others. Historically, Kimjang used to be a standard preparation for all Koreans to prepare food for winter storage. As times and lifestyles changed, it went through several stages of changes. It moved from being a family and village yearly tradition, where men, women, and children participated to where women carried the responsibilities of carrying on the tradition due to the increase in nuclear families. However, in recent years, fewer households are doing Kimjang, and there seems to be cultural discontinuity taking place among women who used to play the central role in generational cultural communication.

Additionally, the oral communication of Kimjang has become even less important as most of the information is now done on the Internet, which was made possible following the development of information technology. In the past, the oral communication was made from the mother-in-law to the daughter-in-law for Kimchi recipes. For a newly wedded daughter-in-law learning her husband's family's Kimchi recipe constituted an important part of her cultural adaptation to the new family. However, in recent years, a significant part of Kimchi recipe learning has been done through Internet searching. According to the Naver Search Words Statistics, every year during Kimjang between late October and early December, Kimchi-related search words such as 'how to make tasty Kimjang Kimchi', 'how to make less spicy Kimchi', various variations of Kimchi(such as water Kimchi, white Kimchi, cubed radish Kimchi, leaf mustard Kimchi, green onion Kimchi etc.), and famous Head Families' Kimchi recipes rank as the top searches. This presents a very different cultural picture from the old oral communication, learning about Kimchi from mothers, relatives, and neighbors.

In these circumstances with so many changes taking place, it is believed that a lot of research is needed on the communication method of the Head Families' Kimchi and Kimjang. While Jeolla-do provincial Kimchi, Gyeongsang-do provincial Kimchi, Buddhist Temple Kimchi, and Royal Court Kimchi are all very important cultural assets, and they

need safeguarding, the traditions around the recipes and traditions of Head Families' Kimchi and their Kimjang are considered particularly valuable cultural assets, because they are representing the cultures of respective families and regions. For over several hundred years, Kimjang traditions of Head Families, and famous families' and their various fermented foods have been among women of these families, and they have now emerged as a hot topic of international interest. Head Families' Kimchi and fermented foods recipes were enjoyed by Korea's ancestors, and their ingredients and recipes went through several changes before they become what they are today. As a part of everyday living, these recipes and traditions can be considered part of Korea's intangible cultural heritage. In addition, since Kimchi is eaten at home and with guests, not for special events, it can be said that it symbolizes Korea's culture with respect to humility and sharing.

Thus far, most preservation efforts of Head Families were for tangible properties, such as houses and shrines, or ancestral and food rituals. No recognition had yet been given to the eldest daughter-in-laws of the Head Families as the initiates of the traditional foods, and no effort has been made for the preservation and communication of the Head Families' fermented foods.

At interviews, many eldest daughter-in-laws said the same, 'it is just a handed-down traditional food of my family, nothing special', 'this is our everyday food, "it is a simple food, I don't think it was worth anything"'. Other than being orally or by communication from mother-in-laws to daughter-in-laws or daughters, no effort has been made for the documentation of the Head Families' foods. Some Head Families do not even have daughter-in-laws to transmit their traditional foods orally. Some Head Families were not aware of the cultural values of their fermented foods, thus cultural discontinuity seems to be taking place. In an effort to preserve the Head Families' traditional fermented foods including Kimchi and Kimjang, NAVER, in a joint venture with the World Institute of Kimchi, began building an online encyclopedia <Korean Head Families' handed- down fermented foods

encyclopedia) since August 2013. The encyclopedia was created to promote the values and excellence of Kimchi and traditional fermented foods of Korea and to preserve their recipes. Oral recordings and dictations have been done that include information about Korean Head Families, famous families' Kimchi and Kimjang, winter Kimchi making traditions. The results are presented in storytelling type of articles. These interwoven stories of Kimchi and Kimjang and the information about ingredients, recipes, origins, history, and the lives of eldest-daughter-in-laws have been created through studies of old references, case studies, interviews, and oral dictations.

The Naver online encyclopedia has been chosen as a means of transmitting Kimjang, because 'encyclopedia stands for the entirety of knowledge of science, nature, and human activities and others condensed and arranged in alphabetical order by categories. It allows easy access without discrimination for everyone by just typing in search words; therefore, it is one of the best Medias, and a very necessary foundation that can best relay information and the culture of fermented foods from the Head Families to the people who need them.

The on-line encyclopedia made with the participation of food and food-related area specialists is an unprecedented project never attempted in any other country in the world. It carries in-depth expertise and is equipped with the means for two-way communication, which will enable the collection and reflection of user's requests and opinions. Considering the advantages of the on-line encyclopedia, it is believed that it is an up-to-date alternative fit for the IT era. It is able to preserve and transmit the Head Families' Kimchi and Kimjang heritages that had once relied on only oral communication. It can also be an exemplary reference for the communication of other cultural heritages.

2. The significance of the on-line encyclopedia is that it is a method for an alternative cultural communication in the IT era.

The previous way of communicating the methods of Kimjang, Kimchi, and the sharing of these traditions as introduced in the applications for the UNESCO Intangible Cultural Heritage of Humanity website was by oral instruction and storytelling among women for generations. “Information about Ingredients, recipes, and preservation methods relied mostly on family experiences.” In other words, information about Kimjang reached people on a small scale and was orally from the family members with more knowledge and experiences to younger generation of family members or other people.

Not only the traditions of Kimjang but also most of the similar intangible cultural properties of Korea were communicated to others on a small scale. However, some studies have mentioned the importance of storytelling in relating cultural heritages to others. This is done through the archiving and compilation of documentation through the preservation of references, case study research, recordings, and others.

While the oral and archiving preservation of traditional culture is important, it is an up-to-date method of communication that allows for a wider and easier access for people. However, it also requires careful review and experience to enjoy the traditions and culture. This is particularly true, when huge amounts of information are being distributed through the Internet due to IT technological development. Since the off-line content is mainly developed for the preservation of traditional culture, especially food culture, it can be difficult to attract people’s attention. Food is a living and changeable part of a cultural heritage, and nation’s food culture kept in archives would not be advantageous to someone who wants to integrate it into their modern day lives

The preservation and communication of an intangible culture can only be achieved when the stories of a culture also include information about what changes it went through is known and understood by those learning about it, and then the cultural information is easily made available for the people to experience, enjoy, and use in everyday life.

In this regard, a storytelling method of on-line encyclopedia is an appropriate alternative to communicate food culture in an IT era. Looking into a broader concept of archiving justifies the appropriateness of this proposition. The traditional archive is for compilation and preservation; however, archiving in a broader sense(per formative archiving) is more than a passive preservation of database space. It is a living archive. Wolfgang Ernest, who emphasizing the importance of the digital archive, said, the “absolute knowledge(traditional archive)” in the traditional encyclopedia will be replaced by constant “rewriting and additions(as is with Wikipedia).”

In other words, the concept of archives has been expanded to include digital content, where users can also be the participants. In this regard, the expanded archive is equipped with the characteristics of digital content, such as Wikipedia, which allows a user to participate and share their own knowledge. If implemented, this would be a new alternative method for cultural communication for Korea.

However, this does not mean the on-line encyclopedia is the same as with other archives in the broader sense. It is different from Wikipedia and other similar on-line video platforms. This on-line encyclopedia has been made using a more systematic classification that includes many layers of content checking and editing before they were put on the Internet for the user.

This on-line encyclopedia differs from traditional encyclopedias in that, in addition to an encyclopedia’s universal knowledge, it has been built based on user participation, which was possible thanks to a feedback system. It is also different from Wikipedia in that its basic content has been made based on fieldwork and by food specialists.

Another distinctive feature of this on-line encyclopedia is that its focus is not just a preservation of cultural food knowledge. It is a storytelling type of archive that users can make use of in their everyday life.

In this regard, this on-line encyclopedia represents an advanced step of content building above existing archives. In addition to the documentation and preservation of intangible cultural heritage records, it provides an instant and simple Internet search in a storytelling method that was prepared by specialists for the public. It is not a one-way delivery of knowledge. It is a two-way communication allowing user participation and exchange of opinions.

UNESCO, which is the designated caretaker of intangible cultural heritages, recognizes that 'the best practices to safeguard a cultural heritage' is based on how it is being transmitted and how active the culture continues to be practiced in everyday life.

Documenting disappearing cultural heritages and putting them in a database is of absolute importance, especially a culture's food that is closely connected to its everyday life and a general example of a culture's characteristics. It is worth special mention that focus should be on the communication of a culture through its food, not just on the preservation of its facts. Communication can be powerful when it is done voluntarily and not by force. In the IT era, where 'cyber reality' digital technology rules, this on-line encyclopedia, which carries text, pictures, video, and sound files, can be a powerful means to continue, transmit, and develop an intangible cultural heritage in a way people can experience and enjoy. This platform is the bases of an approach that is significant to this on-line encyclopedia, built by specialists, which serves as an alternative method in place of the traditional archives for the communication of culture in the IT era.

3. Background of the Korean Head Families' Handed-Down Fermented Foods Encyclopedia

The NAVER Knowledge Encyclopedia provides extensive content of 1.6 million entries in 14 different categories from over 1,000 databases that include topics, such as humanities, social science, culture and arts, life leisure, animals and plants, history, and others. There are also 12 popular cultural categories, such as the Korean Culture Encyclopedia, Info Graphics, Korean history, historical records, food encyclopedia, and others.

In terms of the contributions made by specialists, the NAVER Knowledge Encyclopedia has the largest number of entries in the world. In addition, its utilization percentage is very high over 90% of the articles have been searched more than once by users. With the rapid, increase of mobile phone use, the mobile knowledge encyclopedia records more than 10 million visitors a month. In addition, the NAVER Knowledge Encyclopedia provides various and in-depth content from various specialized fields for users including 『*Golyeosa* (Korean Translation)』, 『*Dongguk Tonggam* (Korean Translation)』, 『*Sagi*』 that used to be beyond the reach of the general public.

NAVER, an online search engine in Korean, began the on and off-line encyclopedia project in cooperation with specialists in various fields. These included academic associations, research institutes, universities, specialized publishers, and others. It is an unprecedented and unique collaboration project to build knowledge that cannot be found even in world famous portals like Google or Yahoo. Presently, NAVER is developing WebPages and databases for categories such as <World Foods Encyclopedia>, <World Festivals, Anniversary Encyclopedia>, <Mathematics • Physic Encyclopedia>, <European Royal Families>, and others, in total 25 encyclopedias respective of subjects.

The NAVER Knowledge Encyclopedia is a combination of various Korean encyclopedias and books that it has bought from publishers. Even as it is, there are still a lot of content required, but has no available reference materials either, because there is no written information on the subject or because of overseas copy right issues. The on-line encyclopedia has planned to supplement these weaknesses.

There are a couple reasons that several subjects were not included in the Naver Knowledge Encyclopedia. They have a low market value and interest in the subjects from a worldwide view or there was a limited range of information on the subject. These missing subjects were the target of the on-line encyclopedia. Its content building was done in a different way from the publication of other encyclopedias. From the initial stage, a lot of thought was given to the encyclopedias multiple uses. This includes basic work for book publications, e-books, creating a means for two-way communication between the encyclopedia's network of users and authors. Naver has supported publishing companies with grants in return for experts' participation and their special knowledge in various fields. This project opened the door for specialized publishing companies, who wanted to publish specialty books, but could not because of low market interest. From the beginning, they actively participated in building a system of excellent and in-depth content on these specialty subjects. The content will be published in book form later.

〈Korean Head Families' Handed Down Foods Encyclopedia〉 is the first project planned. It will be used to discover Korean culture that is worthy of academic studies and preservation. In addition to responding to users' requests for information on traditional foods of Korea, this encyclopedia's digital content about Kimjang and other information about handed-down traditional foods of the Head Families and the Great Families of Korea is to achieve 'cultural communication and have people enjoy the cultural heritage in everyday life' by posting the information on a platform.

〈Korean Head Families' Handed-Down Foods Encyclopedia〉 is a valuable reference for the communication and preservation of Kimjang and traditional fermented foods of Head Families and the Great Families. Learning about Korea's Food culture has relied on oral communication. Most of the initiates of the traditional foods are advanced in age, and it is getting more urgent to learn from them about the traditional food culture and recipes before they go. Failure in documentation or recording the initiates' oral statements means that the valuable cultural assets will disappear for good, and they can never be recovered.

There is an example of the problem of oral communication and generational differences between mother-in-laws and daughter-in-laws. The eldest daughter-in-law of Head Families asked mother-in-laws about "What amount is needed respective of ingredients to make Kimchi?" Mother-in-law's answer was 'about', 'a handful', 'roughly'. The daughter-in-law said at an interview, 'I want to have a detailed recipe with accurate amounts for each ingredient.' This example suggests the need for a detailed recipe and up-to-date communication method other than the traditional over-the-shoulder eye-measurement learning.

There are various documents showing the great interest in preserving traditional foods during the Goryeo Kingdom and Joseon Kingdom. Some Head Families left written references of their foods and recipes: 『*Suwunjabbang*』('noble food recipe'), 『*Onjubeop*』('how to make alcoholic beverage'), 『*Eumsikdimibang*』('food in the king's dining room'), 『*Jusiksiui*』, 『*Ueumjebang*』, and all valuable historical references on the foods of their periods.

4. Building the <Korean Head Families' Handed-Down Food Recipes and Tradition Encyclopedia>

1) Analysis on users' demand

Analysis on the Naver search words found that there were a lot of Internet user demands for. These included information on traditional fermented foods, such as Kimchi, soybean paste, red pepper paste and others. Some of the search engine key words were: 'how to make tasty Kimjang Kimchi', 'dongchimi'(water Kimchi), 'ggakdugi'(cubed radish Kimchi), 'leaf mustard Kimchi', 'green onion Kimchi', 'how to salt Napa cabbage', 'how to make less spicy Kimchi' and others.

Table 1. Kimchi- related search words (Oct. ~ Dec. 2013, NAVER)

	Search word		Search word
1	Kimchi	16	Sesame leaf Kimchi
2	Napa cabbage Kimchi	17	Korean lettuce Kimchi
3	KimjangKimchi	18	(western) cabbage Kimchi
4	Leaf mustard Kimchi	19	Radish Kimchi
5	White Kimchi	20	Yeosu mustard leaf Kimchi
6	Green onion Kimchi	21	Whole head Kimchi
7	radish Kimchi	22	Wrapped radish Kimchi
8	Wrapped Kimchi	23	Turnip Kimchi
9	Sliced radish water Kimchi	24	Cucumber Kimchi
10	Young radish Kimchi	25	Onion Kimchi
11	Water Kimchi	26	Domisol Kimchi
12	Garlic chive Kimchi	27	Oyster Kimchi
13	Jeolla-doprovince Kimchi	28	JeollaKimchi
14	Small radish Kimchi	29	matKimchi
15	Dolsanmustard leaf Kimchi	30	Small green union Kimchi

Despite huge requests for information on Kimchi and traditional fermented foods, NAVER knowledge encyclopedia has only a brief glossary on fermented foods and limited information on Kimchi under the subtitles of definition, outline, ingredients, preparations, and Kimchi making. Though it has independent entries on some fermented foods, for example, Kimchi, soybean paste, jangajji(salted vegetables), salted fish and others, it is not a storytelling type of content that covers the origins of the word, history, nutrition, who's recipes, and other pieces of information. It does not have information on some disappearing traditional foods like pheasant sikhae(fermented pheasant meat mixed with grains), anchovy sauce, red bean paste, or others.

Wikipedia English encyclopedia is similar to NAVER. It has independent entries on major fermented foods such as Kimchi, soybean paste, jangajji, salted fish and others. However there is only limited information under each entry and no entry on disappearing foods such as 'less spicy Kimchi', young radish Kimchi, and leaf mustard Kimchi. This made NAVER aware of the need for the English translation of the <Korean Head Families' Handed Down Foods Encyclopedia> for overseas users in the future.

Fermented food related publications both at home and abroad are more or less the same as NAVER, in terms of format and content.

『*Umsikdimibang*』, 『*Sangayorok*』(the oldest recipe book written by Jeon Sun-ui, royal physician, published in 1450), 『Kimchi Encyclopedia』 are all Encyclopedia type books with limited information mostly with emphasis given on recipes. Kimchi books have been published overseas; however, they are also mostly recipes as well. In the case of Head Families related publications, they are mostly focused on the historical aspect of the Head Families, their houses, foods, and table settings for ancestral rituals, with little information on their everyday life food and recipes.

In recent years, Korea has witnessed an increased interest in the Head Families foods, and as a result, many exhibitions and forums have been held in addition to programs shown on TV. However, they, were mostly

geared to public interest, and could not maintain more than a temporary interest.

Some books about traditional foods have been published as a result of research on the recipes and traditions of Korea's Head Families foods. From 2010, the Korean Agriculture Development Corporation had been working on a project called "From Handed-down to Sharing", which are recordings of the eldest-daughter-in-laws information about their foods and table settings. In 2003, the National Research Institute of Cultural Heritage conducted research on ancestral ritual formalities, but they were mainly on ritual foods and table settings, not comprehensive storytelling with in-depth information about the origins, history, and recipes of the Head Families foods from initiates and others with a specialized knowledge.

The research of the digital content, off-line publications, and broadcasting programs found that no humanistic type of research had been done on fermented foods. Additionally, there were also no effort made for the standardization of the handed-down traditional recipes of the Head Families, and no storytelling type of information archives on the traditional foods were available anywhere.

With increased interest in health food worldwide, fermented foods have emerged as an important item that helps strengthening the immune system. Korean fermented foods are made with vegetables, and they are considered healthier than the popular fermented foods made from milk. Korea has various types of salty or vinegar pickled vegetables that have a long preservation time, and also keeps their taste and nutrients intact. Of the various fermented foods, Kimchi can be said to represent the Korean culture, as it is a required side dish to all main dishes for Koreans. Regardless where they live, they make Kimchi, and it influences the foods of the countries where they live.

Information of the fermented foods of the Head Families is a very important subject. Especially, in the development of cultural heritage preservation, content industry development, and a high-value added tourism program, which are the most fitting content for the sixth

industry. The fermented foods of the Head Families is a subject that may attract the attention of the world's people in that it is a culture that has been transmitted orally over several hundred years mainly from older generation of women to a younger generation of women.

NAVER began developing the on-line <Korean Head Families' Handed-Down Foods Encyclopedia>. It was in respond to user demands for information on fermented food, and their desire to develop and preserve the fermented foods of the Head Families, which emerged as an interesting subject for studies internationally. It was meant, to popularize fermented foods and have more people 'living the culture' in their everyday life. The following is the general guideline of the encyclopedia.

- To select the handed-down fermented foods of Korea's Head Families, conduct research on historical documents and references, and hear recorded oral presentations before it gets too late.
- Target items are Kimchi, jangajji, soybean paste, soy sauce, red-pepper paste, vinegar, salted fish, sikhae (fermented fish mixed with grains).
- 'Head Families' Kimchi' will be the entries, instead of a common noun 'Kimchi', source and recipes will be given in each entry
- Storytelling type on-line content that provides easy and interesting reading while allowing easy access to users

2) Content building and research methods

The development of <Korean Head Families' Handed Down Foods Encyclopedia> needed cooperation with fermented foods specialists, and it was done as a joint venture project with the World Institute of Kimchi and the food specialized publishing company 'Cookand'. The 'World Institute of Kimchi' handled the encyclopedia planning, research, writing; 'Cookand' photos, article editing, and publication, while the 'Creative Culinary Institute of Korea' helped with fermented food recipe standardization and demonstrations. Finally, professional writers contributed to the project with storytelling types of articles.

In particular, agreeing with the purpose of the on-line fermented encyclopedia, the Korea Tourism Organization participated in the project in the form of talent donation. It has translated summery explanations into major languages English, Japanese and Chinese(both simplified Chinese and traditional Chinese), thus makinge the encyclopedia's content available for foreign users and for introducing traditional Korean foods overseas.

Table 2. The fermented food names by foreign language
(Examples : Milyang Park clan Head Family 'Half Water Kimchi')

language	Name	Description
English	Bandongchimi	Bandongchimi is a type of kimchi of the Miryang Park clan family of Naju that has been passed down for generations. It is made by adding juice from fermented shrimp to the regular cabbage kimchi, making it similar to dongchimi (radish water kimchi).
Japanese	パントンチミ	「パントンチミ」は、普通の白菜キムチにアミの塩辛スープをかけ、トンチミ（大根の水キムチ）に似た形で作る羅州密陽朴氏宗家に代々 伝わるキムチだ。
simplified Chinese	班家水萝卜	班家水萝卜泡菜是在普通的整颗泡菜中加入蝦醬湯汁制作而成，与水萝卜泡菜具有类似形态的罗州密阳朴氏宗家祖传泡菜。
traditional Chinese	班家水蘿	班家水蘿卜泡菜为羅州密阳朴氏宗家的家传泡菜，制作上采用将蝦醬湯汁街入整颗白菜泡菜中的方式，形态与水蘿卜泡菜相似。

Various literature reviews and fieldwork were done by researchers. Literature reviews. Based on their results, the online encyclopedia began including standardized recipes, writing, fact checking, editing, and others.

Literature reviews were done separately on foods from the Head Families. As for literature reviews, researchers focused on traditional fermented foods in old texts and cookbooks. The Head Families' research was based on existing documents of the subject and through interviews with researchers and specialists' consultations for verification.

Fieldwork was done in two steps. A preliminary survey was in preparation of the project; general reviews on related references, preliminary interviews, selection of entries, checking the availability of ingredients, and others. Field surveys included recipe checking through cooking demonstrations, story recordings, and in-depth interviews. Additionally, photos, oral presentation recordings, and video filming were done to archive recipes, foods, the home settings of the families, kitchen utensils, various objects used by the eldest daughter-in-laws, and others at the time of fieldwork. Follow-up studio demonstrations were done when photo taking or filming was not possible for various reasons. For example, ingredients were not always available or in season at the time of the initial fieldwork.

3) Completion of the on-line encyclopedia and its special features

〈Korean Head Families' Handed-Down Foods Encyclopedia〉 has been developed within the above mentioned scope and through the above-mentioned research methods. It carries the recipes and stories of the 120 fermented foods of the 12 Head Families. It took one year and five months from August 2013 through November 2014. It is now servicing users on NAVER in Beta type. The beta type service period is to collect users' opinions and for needed additions and/or corrections. Additional fieldwork will be done on any imperfections of the previous research or needed supplementary information regarding the origin,

history and other matters of importance of the fermented foods, and the results will be reflected on the on-line encyclopedia.



(Chart 1) “Korean Head Families’ Handed Down Food Recipes and Tradition Encyclopedia” example

Encyclopedia concepts

〈Korean Head Families’ Handed-Down Foods Encyclopedia〉 represents a humanistic understanding of the fermented foods, including the traditional Kimchi of the Korean Head Families. It is organized under categorical fermented food titles, such as the origins, history of the food, varieties, and recipes. The head houses and cooking utensils, and the life of the eldest daughter-in-law as they are related to food are also included.

Classification and content

〈Korean Head Families’ Handed-Down Foods Encyclopedia〉 has been organized with the thought that the Head Families foods are a part of food studies. During the beta service period, “Korean Head Families handed down fermented foods encyclopedia” was being offered under the umbrella NAVER Knowledge Encyclopedia Foods Encyclopedia. Additional fermented foods and other various related food titles will be arranged as follows to provide a comprehensive and systematic understanding of fermented foods.

Encyclopedia classification: life/leisure> foods> fermented foods>
Korean Head Families' handed-down fermented foods encyclopedia

Content : General food titles: definition / history / kinds / special features
of the fermented foods etc.

Fermented food titles: Milyang clan Park Gyeong-jung Head

Families 'half water Kimchi'/Jangseong clan Kim In-hu Head

Families 'dried persimmon cabbage Kimchi' etc.

Entries

The on-line encyclopedia was first built with 120 entries under the fermented food names, such as half water Kimchi, squid Kimchi, diced radish Kimchi with walleye Pollock gills, fresh Kimchi salad with soy sauce and others. Of the 50 Head Families, 12 Families were selected first for the encyclopedia. Of their various fermented foods, there were 8 to 12 types of foods from each family, and were included in the encyclopedia after extensive research using interviews and various content building processes.

Titles vary, but mostly each entry is organized as follows: basic information(regional distribution, classification, fermentation and eating, ingredient, season, people, similar foods, summary information translation(English/simplified Chinese and traditional Chinese, Japanese), definition, history, special features, recipe and ingredients, eating, other fermented foods of the Head Families, head of the house and cooking utensils, life of the eldest daughter-in-law, visual encyclopedia and others. Sub-titles were based on an analysis of users' most frequently search words, related search words, and content of the search words as related to books.

Special features of the encyclopedia content

〈Korean Head Families' Handed-Down Foods Encyclopedia〉 is organized in a way that the history of Head Families and their foods are placed under the categorical titles of fermented foods. Different

from the usual structure of encyclopedias that introduces foods and table settings under the Head Families entries, this type of encyclopedia is useful in understanding the eldest-daughter-in-laws status in each family's history, and relationships with other families, their origins, and their way of communication of their fermented foods, and others.

Standardized sub-titles are given under each Head Families entry and explanations are in the form of storytelling. This systematic and comprehensive encyclopedia provides in-depth information on the fermented foods from various angles and the storytelling explanations help make it easy and interesting reading. The unified sub-titles have been chosen in consideration of possible search words to help users find information quickly.

In order to help non-Korean users understand fermented foods, a brief explanation is given in English, Chinese, and Japanese for each fermented food followed by a visual in the encyclopedia under separate sub-titles. The visual encyclopedia is organized in the form of a narrative to help users get a glimpse of the Head Families' history just by browsing through the pictures. The translation of the names and brief explanations are the first attempt to introduce Korean traditional fermented foods to non-Koreans, and it is expected to be a standard example for other subject research.

The encyclopedia is written in plain language for easy reading. Synonyms, English names, other related terms, and a list of references are given to help make browsing easy and comprehensive. To make the most of its main feature of being an on-line encyclopedia, a lot of thought was given to hyperlinks, related readings, and external links to other services.

4) Expected effects and Utilization

A strong point of Korean fermented foods is that they are mostly vegetable fermented foods, and it is a subject of much academic debate and has international attention. Based on this on-line encyclopedia, other food related content or research expansion is believed possible.

Because of uniqueness as a storytelling encyclopedia providing a humanistic understanding of food with stories of the Head Families, and the life and recipes of their eldest-daughter-in-laws, there may be a food tourism business spin off.

As mentioned previously, the on-line encyclopedia was completed by the end October last year. It was made available on the NAVER Knowledge Encyclopedia website, and began services from November free of charge. Off-line publication is in preparation to be completed in early 2015. NAVER held “the Korean Head Families Kimchi Exhibition” at the 2014 Seoul Kimjang Festival, and made case presentations at the Kimchiology Symposium hosted by the World Institute of Kimchi and at various academic conferences both home and abroad. NAVER will continue its promotional efforts for the on-line encyclopedia’s content and research methods.



〈Chart 2〉 introduced at the 2014 Seoul City Kimjang Culture Exhibition

5. Significance of the <Korean Head Families' Handed-Down Foods Encyclopedia>

1) As a medium for academic research and cultural communication

On-line encyclopedias are not a one-way exchange of knowledge like the library or museum. It is a two-way communication, whereby the knowledge is being shared and circulated. The handed-down fermented foods of the Head Families, which are the intangible cultural heritages of Korea, were put on line to be used by users. Users learn from it, share, and put what they learned into practice, thus continuing to transmit the intangible heritages to the next generation, which might serve as a foundation for the creation of another new culture.

As an important academic subject and as a medium for cultural communication, the <Korean Head Families' Handed-Down Foods Encyclopedia> has the following values and significances.

First, it is the first attempt to get the stories and recipes of fermented foods from the Head Families, which is a very important subject for humanities and a topic of international interest. In particular, standardization of ingredients and recipes that have been done based on the results of detailed fieldwork differentiate this on-line encyclopedia from other studies on head houses or Head Families' foods.

Second, from the very beginning, storytelling content has been provided with the aim of providing friendly digital content services to users. However, there was a lot of discussion on the need for storytelling research on the traditional foods and digital content development on Korean Kimchi culture, other than limited data or archived compilations of references of the Head Families, little content development has been done.

Third, this on-line encyclopedia represents the combination of IT technology and humanities studies, supplementing the shortcomings of both the oral communication and traditional archives as a means for transmitting and living the intangible cultural heritages. As Internet

searching became the main means of getting information, digital content has become more useful and an easier information source than any library or museum. It provides an easy and quick access for users to find cultural heritage information, and this is a differentiating point from traditional archives that are mainly for the preservation of information. In addition to user participation and two-way communication, its content was made based on fieldwork by specialists, which sets it apart from Wikipedia and other on-line video platforms.

Fourth, through standardization of ingredients and recipes, the on-line encyclopedia provides a solution to the generation gap between transmitter and initiates caused by fast social changes such as the development of urbanization, nuclear families, and the Internet. Kimchi making and Kimjang used to be learned by watching over someone's shoulders. However, over time, there has been a growing demand for standardized recipes. The on-line encyclopedia has contributed to an extent to the standardization of recipes.

Fifth, the encyclopedia is organized with consideration for users to share, easy connections for two-way communication, and the dissipation of knowledge. Based on the encyclopedia's content, various service models have been set up, such as an on-line encyclopedia, on-off line publication, content exhibition, and presentations at academic conferences, thus setting up the one source-multimedia useful model.

Sixth, the on-line content is the result of a private and public joint planning and investment with the participation of various specialist groups. Thus far, most research and content development of the cultural properties were government-led and mostly for the preservation of cultural heritages. With the NAVER on-line encyclopedia as a turning point, more joint venture projects are expected. Actually, since NAVER's on-line encyclopedia, there have been more content building joint projects came up, for example, the Korean Market Encyclopedia by the Small and Medium Business Administration and NAVER; Asia Stories Encyclopedia by the Ministry of Culture, Sports and Tourism, and the Asia Culture Hub City Development Team.

2) Eldest Daughter-in-laws of the Head Families and other project participants

The following explains the significance of the <Korean Head Families' Handed-Down Foods Encyclopedia> from the point of the initiates of the traditional foods of the Head Families and other project participants.

Jo Yun-a is from the most recent generation of daughter-in-laws of the Park Se-dang Head Family. This is from the Bannam Park clan in Uijeongbu city, Gyeonggi-do province. She has said that the significance of the fermented foods encyclopedia is the continuation of Korea's 'sharing culture' that is such a part of the Head Families. Through sharing and transmitting the knowledge of the food culture and standardized recipes of the Head Families, these traditions will continue to the next generations.

Jo Yun-a also said that while she was grateful for the media's interest in the Head Families' foods, she has the feeling that a brief one time introduction from TVs or magazines is not enough to deliver any type of in-depth information. <Korean Head Families' Handed-Down Foods Encyclopedia> made her think once again of how to best share and transmit the traditional culture in the digital era.

Jo Yun-a said, 'I was happy to see my mother-in-law's Kimchi making demonstration and about the standardization of recipes. It was the first time I came to understand the need for it. I told my mother-in-law of this, and she is aware of it, too.' She said she was willing to open the recipes of the handed-down fermented foods and felt the need for cultural communication and standardization in response to the growing interests on the Head Families. She just did not know how. For example, Jo said "when her mother-in-law put honey in the food, I asked "how many spoons?" The answer was 'a little' or 'just about the right amount'. She works fast, sometimes she uses a spoon, sometimes she just pours honey from a jar, and it was hard to create a standardized recipe." She thought the documentation and standardization of recipes needed help from specialists.

For a modern woman searching for recipe information on the computer or her smart phone to try the recipes, learning the mother-in-laws' recipes orally and over her shoulders did not seem an appropriate communication method fitting to the era. She thought deeply about communication between her mother-in-law and herself, the computer user and communicating with the world. All of these people, who wish to become initiates of a Head Families' recipes and traditions needed standardization. She thought this was of absolute importance. Standardization was hard even when a mother-in-law and daughter-in-law work together. While working with food specialists for an encyclopedia project, the mother-in-law came to understand the need, and actively participated in the standardization of recipes, which had been done mostly by eye-measurement or hand-measurement.

Standardizing handed-down recipes and making them available on-line is in line with the sharing culture of the Head Families. During the mother-in-law's generation, 'Bapbosi' was a means of sharing the food culture of the Head Families but in the digital era, placing cultural content like recipes on-line is certainly an efficient means of sharing. "Sharing the cultural content should be more than some pictures of traditional Korean houses, traditional food demonstrations, or grinding millstones wearing traditional Korean clothes." The knowledge of the handed-down traditional foods compiled in the encyclopedia and to have it on a digital media for sharing is indeed a continuation of the sharing spirit of the Head Families. Jo said she wanted to share the fermented foods of Head Families, because they are made with easily available ingredients and good for health as witnessed by her. She had become healthier since she began eating the fermented foods after marriage. It is the same spirit of sharing that she keeps her personal Web-log, where she introduces her Head Families's recipes, such as 'how to make a dried persimmon', 'how to make maejakgwa(a Korean traditional thin cookie)' and others.

Since participating in the development of the 〈Korean Head Families' Handed-Down Foods Encyclopedia〉, a big change took place in the Song Jun-gil Head Families. The Eunjin Song clan is living in Daejeon, South Chungcheong-do province. Thus far, Song Jeong-won, the only daughter among many sons of the Song family was the only initiate of the family's traditional foods. However, since their participation in the encyclopedia, two other daughter-in-laws have declared that they also want to learn about the family's foods. This is an example of how the discovery of the life of an eldest-daughter-in-law of a Head Family for the encyclopedia's development has led to expanding the number of family initiates and made the clan aware of the values of their cultural heritage.

The Head Family of the Eunjin Song clan was particularly important in that their foods are different from other Head Families'. For example, their thinly sliced radish water Kimchi is for the family members with hereditary bad teeth; their cabbage Kimchi was cut into bite-size for the same reason; their original Chungcheong-do style Kimchi that was possible because both the eldest daughter-in-law's parents and her husband parents were Chungcheong-do native-born; they use very fine chili powder and shredded red peppers a lot.

Thus far, the Head Families' foods have been passed down exclusively through the women in the family. The foods' cultural value had not been recognized, and there were not many people who wanted to learn about them. With the development of the 〈Korean Head Families' Handed-Down Foods Encyclopedia〉 it became a turning point, as the daughter-in-laws began to be interested in and learning the Head Families' traditional foods. In addition, a great number of people can use the recipes, when it is put on a digital platform. It is an efficient means of transmitting cultural heritages to a younger generation of people, who can use the information in their everyday living.

In other words, thanks to the on-line encyclopedia and the standardization of recipes a greater number of people began to be interested in traditional foods, by both making and enjoying them. In

the case of the Eunjin Song clan Head Family, the on-line encyclopedia had two more people (two daughter-in-laws) interested in their traditional foods. However, the encyclopedia is believed to have created a lot more cultural heritage bearers, though this is hard to prove. Song Jeong-won, the only daughter in the family said, “I miss my mother’s foods. I asked her a lot and wanted to show her foods to others. As it is not possible to invite all the people to our home, putting her recipes on-line is an excellent means to share her recipes. Particularly as Kimchi is a food served everyday with every meal for all Koreans having easy access to her recipes will help many people. When I receive feedback from users, as an initiate I feel more responsible for making them better.

The off-line content that had been handed down exclusively to a small number of people made available on-line created a lot more interest in both the cultural heritage holders and successors, and it ensures the continuity of a culture. If the aging intangible cultural property bearers come to understand the value of their cultural heritages, and if more food related-content developments are pursued, then these women of the Head Families would become the masters in an apprentice system as practiced in other countries; Master in Japan, Artisan in France, and Artigiano in Italy.

Researcher Lee Deok-seong, who participated in the on-line encyclopedia project, said that after living in foreign countries for a long time, the discovery of the Head Families’ traditional foods that were handed down orally and were disappearing and putting them on record was her biggest achievement.

She said, “Korean fermented foods are very valuable compared with foreign foods, however, Koreans don’t seem to understand its value. They are a precious and sustainable cultural heritage. The development of these projects will help restore Korea’s spirit of sharing, kindness, and pride.” She also said, “Korean fermented foods are an excellent source of healthy food, far better than the fatty western foods. I felt very sorry that the fermented foods were being changed or disappearing

due to the ignorance of their value.”

According to Lee Deok-seong, in-depth fermentation science research and exchange will provide Korean fermented foods a chance to enter the world market, and it is possible they could become a world favorite. The traditional foods development project may expand to other food-related businesses, for example, the development of linking other cultural tourism resources to regional foods.

Film producer Lee Gyeong-deok explained from a visual anthropological point of view the significance of developing content like NAVER’s on-line encyclopedia and advised on the need for visual storytelling.

Lee said that the visual anthropology movement began in the early 1990s with Manchester University, England, as the center and expanded in the mid-1990s to London University. In line with the movement, the ‘International Folk Movie Festival’ has been held and a collaboration course opened for the joint work between anthropology major students and visual/media students. “The traditional cultural content carries visualized text and narrative storytelling put through IT technology-based platforms. This is in responds to the preferences of the 21st century digital friendly generation, and significant for the on-line encyclopedia”, he said.

6. Academic achievements of the <Korean Head Families’ Handed-Down Foods Encyclopedia>

Under the topic “Preservation and communication of the Head Families’ handed-down fermented foods”, research was done with three points in mind: importance of the various kinds of fermented foods of Head Families; the various elements that influenced Head Families’s fermented foods(marriage, family history, ingredients); Head Families’ efforts and communication method to continue their fermented foods

(cook book, recipe standardization and documentation, initiate, cooking utensils and storage place and others). The research found the following three facts.

First, the importance of fermented foods in the Head Families' diets has not decreased over time. This fact is proved in that there is no big difference in the number of fermented foods being enjoyed now then from those included in the old documents. Though some changes took place in ingredients and storage methods, some foods are disappearing, for example, pheasant meat stuffed cucumbers and soy-sauce Kimchi and jeupjang(soybean paste with eggplant or cucumber or other vegetables in it). Most of these old fermented foods have been continued until now. This suggests that the importance of the fermented foods in Koreans' diet is large, and the fermented foods are worth continuing research into the future.

Table 3. Fermented foods of the Head Families

region	the head families'	fermented food	food name
Naju, South Jeolla Province	Park Gyeong-jung, Milyang Park clan Head Family	Kimchi	half water kimchi, red leaf mustard kimchi, Cabbage Kimchi(Kimjang Kimchi)
		soy sauce	chili paste, thin soybean paste, mother soy sauce, soybean past with sesame press cake
		salted seafood	salted anchovies
Jangseong, South Jeolla Province	Kim In-hu, Ulsan Kim clan head family	Kimchi	cabbage with dried persimmon, Red Leaf Mustard Kimchi
		salted seafood	anchovy sauce
		pickled	perilla leaf pickles, green chili pickles, radish pickles, young garlic stem pickles, persimmon pickles, garlic pickles, Chinese plum pickles
Asan, South Chungcheong Province	Yi Jeong-yeol, Yean Yi clan head family	Kimchi	kimchi with raw fleshy prawns, kimchi with salted yellow corvine, gourd kimchi, stringy stone crop water kimchi, kimchi with pheasant meat, simple kimchi, Radish Water Kimchi(yakji, muttongkimchi)
		soy sauce	Thin Soybean Paste
		salted seafood	salted yellow corvine
		pickled	persimmon pickles, Korean melon pickles
Gangjin, South Jeolla Province	Youn Jong-jin, Haenam Youn clan head family	Kimchi	young garlic and red lead mustard kimchi, Chinese celery kimchi
		soy sauce	medical soybean paste, compound chili paste
		salted seafood	glass shrimp sauce
		pickled	abalone pickles, gynura pickles, bitter melon pickles, kohlrabi pickles, mulberry lead pickles, giant butterbur stem pickles
Daejeon, South Chungcheong Province	Song Jung-gil, Eunjin Song clan head family	Kimchi	diced radish kimchi, Stuffed Cucumber Kimchi, Jang Kimchi, Nabak Kimchi, Cabbage Kimchi(Kimjang Kimchi), Radish Water Kimchi
		soy sauce	sticky rice cake chili paste
		salted seafood	salted bighead croaker
		pickled	Chinese cabbage pickles
Nonsan, South Chungcheong Province	Papyeong Youn clan head family	Kimchi	Stuffed Eggplant Kimchi, Jang Kimchi, Green Onion Kimchi
		soy sauce	gyodong jeondok soy sauce
		pickled	perilla leaf pickles
		vinegar	Omija Makgeolli Vinegar
Changwon, North Chungcheong Province	Ryu Sang-hyeon, Munhwa Ryu clan head family	Kimchi	Radish Water Kimchi, fresh kimchi salad with soy sauce, Cabbage Kimchi, perilla lead kimchi
		soy sauce	quick soybean paste, seasoned quick soybean paste
		vinegar	Persimmon Vinegar

region	the head families'	fermented food	food name
Uijeongbu, Gyeonggi-do province	Park Se-dang, Bannam Park clan head family	Kimchi	Wrapped Kimchi, stuffed cucumber water kimchi, young radish kimchi, Green Onion Kimchi, winter cabbage kimchi, White Kimchi, young radish kimchi
		soy sauce	black barley chili paste
		pickled	eleuthero pickles, Japanese angelica shoot pickles
Gangneung, Gangwon-do province	Jo Ok hyeon, Changn yeong Jo clan head family	Kimchi	Stuffed Eggplant Kimchi, Jang Kimchi, Green Onion Kimchi
		Fermented Fish	fermented walleye pollock with chili power, fermented walleye pollock with chili threads
		soy sauce	jang stew (ppokjjakjang)
		pickled	jinauri pickles, Pickled Radishes, Pickled Chili Peppers, chili lead pickles
		salted seafood	walleye Pollock roe and intestine pickles, walleye Pollock intestine pickles, freshwater shrimp pickles
Andong, North Gyeongsang Province	Kim Bang-geol, Uiseong Kim clan head family	Kimchi	kimchi with raw fleshy prawns, Perilla Leaf Kimchi
		soy sauce	Thin Soybean Paste
		pickled	Korean angelica lead pickles, garlic chive pickles, hosta pickles, red toon pickles, Pickled Shoots of Japanese Angelica, Pickled Dried Radish, deodeok pickles, Korean angelica root pickles
Milyang, South Gyeongsang	Son Seong-jung, Milseong Son clan head family	Kimchi	Jang Kimchi, Cabbage Kimchi(Kimjang Kimchi), Stuffed Cucumber Kimchi, dried radish kimchi
		soy sauce	quick soybean paste, quick soybean paste
		salted seafood	salted yellow corvina
		장아찌	bean leaf pickles, Pickled Eggplant, Pickled Cucumbers
Jinan, North Jeolla Province	Kim Jung-jeong, Gwangsan Kim clan head family	Kimchi	young radish and winter cabbage kimchi, Garlic Chive Kimchi, stuffed radish red water kimchi, Korean lettuce kimchi, Cabbage Kimchi(Kimjang Kimchi), leaf mustard kimchi, radish kimchi, Green Onion Kimchi
		pickled	onion pickles, chili pickles, Pickled Garlic Stems, steamed soybean paste bean leaf pickles

Second, it is found that local agricultural products, such as seafood and other ingredients available nearby and the history of the family have a lot to do with a Head Families's fermented foods. Seogori (diced radish Kimchi with Walleye Pollock) and Seogoriji (with squid Kimchi) of the Changnyeong Jo clan's Head Families in Gangneung, Gwangwon-do are good examples. They are made of the ingredients from the nearby East Sea. Diced radish Kimchi of the Eunjin Song clan Head Families is made of Napa cabbage and the family's favorite bighead croaker fish sauce. It is very similar to the stereotypical diced radish Kimchi in the late 19th and early 20th centuries. (In appearance, it looks similar to 'seokbakji', Kimchi with radish and various seafood like octopus, abalone, conch, and others, but it has no seafood in it, so it cannot be considered seokbakji). The Milyang Park clan in Naju Head Families' half water Kimchi is a whole cabbage Kimchi where shrimp sauce soup is added to it for three days. It is believed a daughter-in-law from Seoul or Gyeonggi-do province married a man in Naju in the period between the late 19th and early 20th century and introduced this intermediate type of Kimchi (between whole cabbage Kimchi and water Kimchi) to the Naju area. Research into the head families' fermented foods of the Head Families is believed a very valuable study for not only local foods, but also the origin and history of Korean foods in general.

Third, it is found that other than oral communication, no particular effort has been made to preserve the fermented foods of the Head Families, no documentation, no cookbooks, which are the key to keeping intangible cultural assets.

On the other hand, Korean ancestors did document and wrote books about their foods and recipes. Now when publication is much easier than in the Joseon period, no documentation was done, and no cookbook was written, which is telling evidence of modern people's lack of interest and ignorance of the values of intangible assets. The contribution of the <Korean Head Families' Handed Down Foods Encyclopedia> is to provide a big turning point in the appreciation of intangible cultural assets.

Table 4. Head Families' cook books and fermented foods

Head Family	Book title	Publication	Written/ Compiled by	Fermented foods
Gwangsan Kim clan Head Family	Suwunjabang	Cir.1540	Kim, Yu	soybean sauce soybean paste 10 kinds, Kimchi 15 kinds, vinegar 6 kinds, two entries on vegetable preservation methods
Jaeryeong Lee clan Head Family	EumsikDimibang		A woman of the Andong Jang clan	
Uiseong Kim clan Head Family	Onjubeop	End of 1700s	Author unknown	soy sauce and soybean paste 4 kinds
Eunjin Song clan Head Family	Jusiksiui	End of 1800s	A woman of the Yeonan Lee clan	Kimchi /jangajji 7 kinds

7. Conclusion

NAVER developed the ‘Korean Head Families’ Handed-Down Foods Encyclopedia’, which took one year and 5 months, before it began servicing. This kind of project is not something that can be done by anyone alone. It is a result of joint collaborations with various organizations including the World Institute of Kimchi and ‘Cookand’, various groups and specialists.

A 2012 NAVER published a company document with the picture of 『*Sangayorok*』(a farming and cookbook manual) recommended the need for content improvement about traditional foods and the recipes of Korean Head Families and prestigious families. The use of on-line and off-line publications was recommended. The project was seen as meaningful towards the preservation of traditional Korean foods and improving health, which has emerged as a hot topic. This idea was brought to fruition, when NAVER met the World Institute of Kimchi.

At the 1st, Kimchiology Symposium held in 2013, a joint venture encyclopedia project was announced and after one and half years' research and content building works began, and actual content services began in November 2014.

The significance of the <Korean Head Families' Handed-Down Foods Encyclopedia> is that it is the first Kimchi and Kimjang encyclopedia to help preserve and introduce the traditional foods of Korea to a greater number of people. In terms of content it was different from other research in that it has an in-depth and systematic process for the information given in the form of storytelling.

Despite all the project participants' best work, this unprecedented encyclopedia is not without its imperfections.

As more interviews and fieldwork were done, it became obvious that <Korean Head Families' Handed-Down Foods Encyclopedia> needed more than text and pictures. Video footage with the sounds of the interviewees, eldest daughter-in-laws and others is found absolutely necessary. It is with regret that sound recordings and video filming were not planned at the initial stage of the project. Sound recordings and moving pictures serviced on-line should have been far more useful and powerful for cultural communication than references that were kept as archives.

As the Korean Head Families' handed-down fermented foods encyclopedia is a uniquely Korean project that can only be found in Korea, and because it has emerged as a subject of international interest, it has been decided that the encyclopedia will have English, Chinese, and Japanese translations for overseas' users. With the help of the Korea Tourism Organization, names and brief introductions have been translated and made available for non-Korean speaking users.

In order to improve the weaknesses of the on-line encyclopedia, NAVER is planning some additions.



<Chart 3> Hagreaves food map, an example of various use of contents

First, general titles will be added to give users a broader understanding of the Head Families' fermented foods. Fermented foods will also be listed by category with regional maps. Additionally, seasonal fermented foods maps will also be prepared.

In early 2015, the <Korean Head Families' Handed-Down Foods Encyclopedia> off-line book will be published. There will also be more case presentations with further in-depth research results about the Head Families' fermented foods will be presented at overseas Korean cultural centers or at international symposiums.

NAVER is planning further discussions with the Korea Tourism Organization for English translation or translation in major other languages of the encyclopedia for overseas readers. Beside the encyclopedia type information for fermented foods researchers, easy version children's book with illustrations is believed another possibility. In addition to off-line book publication, e-book publication for easy access for researchers and general public is under review.

The sound and video recordings can be made into multi-media encyclopedia. If Head Families agree, the Head Families' foods tour program could be arranged with the help of government organizations or groups concerned. Beside the fermented foods, a traditional soybean based sauce and pastes & other various sauces encyclopedia and a

world food ingredients encyclopedia are being planned.

It is obvious that an encyclopedia or that building on-line content alone cannot be a 100% answer to the preservation and communication of Kimjang in the Internet era. It is, however, believed a meaningful hint or first step toward the understanding that the on-line encyclopedia is not only a useful tool for preserving cultural content, but for Internet-based communications between older and young generations, between domestic and overseas users, and it will eventually help spread Korea's cultural heritage to a wider world. Documentation of Kimjang and fermented foods, Korea's orally transmitted intangible culture, and developing them into digital content allows users easy access to Internet searching is the main achievement of this on-line encyclopedia.

Besides Kimchi and Kimjang, NAVER will continue with encyclopedia projects for other traditional Korean foods. NAVER, as an Internet portal, would be an ideal of what to do best for other companies. It is NAVER's wish that the on-line encyclopedia will help Korean traditional foods and Kimjang be known and be appreciated by the people of the world.

Kimjang, Families, and Inheritance

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I. Introduction

Kimjang(making of kimchi) is an event which belongs to the daily life of Korean families and a phenomenon which occurs across the whole society of Korea. Social-cultural studies of kimjang have thus focused these two aspects. Kimjang is a family-based yearly event conducted participated by relatives and neighbors to prepare for the winter season. Most Koreans regard kimjang as a whole social or national event because they practice it directly or indirectly or at least consider it seriously even if they do not practice it. This was considered seriously in the recent decision to add kimjang to the Intangible Cultural Heritage of Humanity List of the United Nations Educational, Scientific and Cultural Organization. In other words, highlight was given to the event as part of intangible cultural heritage of the Korean community. As the recent focus of academia and the public is placed on kimjang as the preparation to make kimchi, a traditional Korean food, less attention is being paid to kimjang as a daily ritual of family life. I began this study believing that it is necessary to look deep into the way how families conduct kimjang and what they think about doing so. This is because discourses on kimjang with emphasis on the sense of national community and studies focused on behavior and awareness of family members conducting kimjang should complement each other. I believe this study may be able to supplement or modify macroscopic studies on kimjang.

This study starts from the observation that subtle changes are taking place to kimjang every year contrary to the prediction that kimjang will disappear. The changes are taking place silently in our daily life on the two axes of practicality and ideality. Thus they are hardly noticeable without careful watching. I have paid close attention to such changes which are observed only once a year from a few years ago. Although I have looked at kimjang four times from 2010 to 2013 and the results support my hypothesis, more work is needed to be sure of it.¹ Some may argue the changes observed are characteristics of certain regions or classes. Others may argue that the changes are temporary and extraordinary phenomena. To deal with these counter-arguments, this study needs to continue in every kimjang season and the target regions, classes, and families, be expanded.

II. Directions of study on kimjang culture

There have been two approaches to the sociocultural studies of kimchi and kimjang. One is historical approach which looks at the changes which have occurred to kimchi and kimjang from the past to the present (Jung-won Kang, 2013; Chae-rin Park, 2013 a, b; Young-ha Joo, 1994). Another deals with the symbolism of kimchi (Gwang-ok Kim, 2013; Gyoeng-goo Han, 1994). These two approaches greatly contribute to the understanding of kimchi as one of the staple food of Koreans, complementing each other. The former looks at how Koreans have preserved and eaten kimchi under their unique ecological conditions and tries to find its characteristics of each time period while the latter is focused on finding the sociocultural meanings of kimchi and the

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1_ We discussed changes of gimjang in the fall class of the graduate school in 2010. I felt a need for a field study and thus conducted it in Jeonju (2010-2013). Gyeong-jin Lee and Semina Oh who were attending the class did surveys in Buan and Namwon, respectively. They made video clips on gimjang, which were presented in the Society for East Asian Anthropology (SEAA) 2011 Conference. Gimjang in Imsil in 2013 was surveyed by Sung-mi Jung.

kimjang culture. Both approaches are based on the premise that kimchi and kimjang represent Korean culture or foods. They also consider a whole society, which appears to be a people or nation, as their basic unit for study, thereby assuming the sense of community associated with kimchi or kimjang. Although some pointed to difference between classes, age groups, or genders, the arguments were no more than simple declarations or opinions based on intuition, which lacked substantial evidence(Gyeong-goo Han, 2013).

This study will supplement the existing ones on two fronts and deal with unknown aspects of kimjang. First, this study will adopt the case study method, and second, by doing so, will place its focus on behaviors associated with kimjang. This way, this study will avoid a discussion which excludes the participants of kimjang and attempt to define the dialectic relationship between ideals and practices of kimjang centered around the participants. This approach is not only useful in defining the sense of community associated with kimjang but effective in finding the hereditary structure and changes of kimjang. The existing studies have analyzed the symbolic characteristics of kimchi's tastes from the perspective of community consisting of one people or nation or emphasized the ritualistic characteristics of kimjang. These efforts have promoted the recognition of the importance of kimchi as a socially and culturally meaningful subject even though it is nothing but a food. These efforts suggest that the community of kimchi has shrunk or experienced changes in modern society, viewing the community as that of traditional societies. They claim women's group labor, *pumasi* (communal exchange of labor), and networking have declined or altered substantially, making it difficult to carry out kimjang as recognized by almost all researchers engaged in the study of kimchi in modern society. Women's group labor and networking are the prerequisites for kimjang, which is essential to prepare for the winter season, and the community of kimjang changed because the group labor and networking of women went through changes, they claim. If that is true, it would be necessary to try an in-depth analysis of such changes occurring in the inside of

women's community of labor and network. However, most studies point to the vast structural changes such as urbanization and industrialization or such external causes as the rise in living in an apartment and the use of kimchi refrigerator, instead. This resultantly minimizes the meaning of kimjang. This study will examine how women, who play a leading role in carrying out kimjang, maintain and pass down the community of kimjang and how kimjang is inherited through cultural and economic negotiations between different generations of women.

III. Changes of gimjang

There are recent reports that the number of families which make kimchi at home or conduct kimjang by themselves and the scale of kimchi making or kimjang are on the decline. Per capita consumption of cabbage, the main ingredient of kimchi, fell from 63.3kg in 1995 to 51.0kg in 2010(Yong-Sun Lee, Kyu-eun Park, 2011). In addition, production of cabbage also reversed to shrink.² In the meantime, a recent survey of kimchi consumption showed a noteworthy result. Among interviewees, 76.1% said they make kimchi by themselves while 26.9% said they 'receive' kimchi from relatives(Ju Hyeon Kim, Hei Ryeo Yoon, 2012: 301)³. What is interesting is difference between age groups regarding dependence on relatives. Among those in their 30s, 56.3% said they make kimchi by themselves and 50.8% said they receive it from relatives. I assume women in their 30s refer to their family, husband's family, or others with close kinship ties as relatives. The share of women who depend on relatives for kimchi is 28.7% among

2_ Production of cabbage slid to 2.149 million tons in 2010 from 3.149 million tons in 2000. The contraction is attributable to reduced consumption on one hand and increased import on the other hand. Therefore, reduced production does not necessarily reflect shrinking consumption.

YS Lee, KE Park, 「Mid to Long-term Development Strategy for Kimchi Industry」, Korea Rural Economic Institute, 2011.

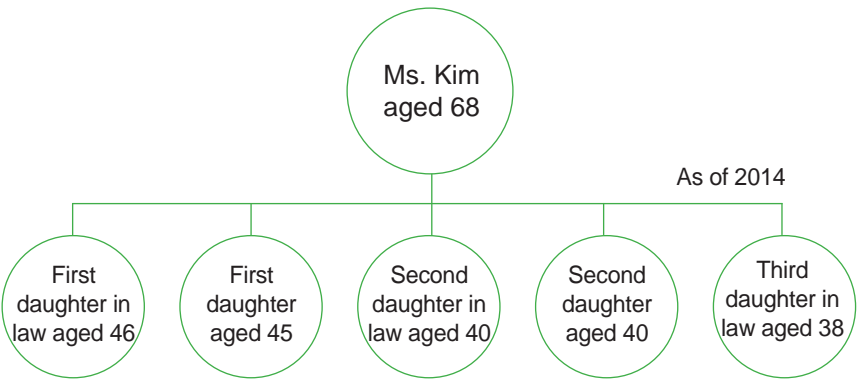
3_ This survey was participated by 1,000 men and women aged 20 or older who were chosen randomly from 15 cities/provinces. The results of this survey seem highly reliable because interviews were carried out by professional interviewers on a one-on-one basis and then verified.

those aged under 50. The share, however, sharply falls to 11.0% and 5.3% for those in their 50s and 60s, respectively. Then, what would it mean that there are more women who depend on relatives for kimchi than those who make it at home? The rest of this presentation will try to answer it.

Cases of Kimjang

· Ms. Kim’s family(Sinpyeong-myeon, Imsil-gun, Jeollabuk-do, examined in 2013)⁴

Ms. Kim lives in Sinpyeong-myeon, Imsil-gun, Jeollabuk-do. She was born in 1947 and grew up in Hyeongok-ri, Imsil-eup, which is not far from her present home. She moved to her present home in Gadeok-ri, Sinpyeong-myeon after marrying her husband she met through matchmaking, and has lived there since then. Since her husband died a few years ago, she has done farming alone. However, she is financially secure. Of her three sons and two daughters, all but the last daughter were married and thus she has three daughters and one son in law. Her five children run their own business or work for a company in Seoul, Jeonju, Incheon, etc. I surveyed kimjang by Ms. Kim’s family for three reasons. First, the scale of kimjang is beyond the average; second, her case shows well how parents in a rural village and children in city are connected through kimjang; last, her family consists of a mother in her 60s and daughters and daughters in law in their 30s and 40s.



In 2013, Ms. Kim and her family conducted kimjang from November 22(Friday) to 24(Sunday). She chose the period, including the weekend for her children and children in law who have to work during weekdays as she had done before. Usually, kimjang is a big event, and in that year she made kimchi with 600 heads of cabbage. Ms. Kim thus completes her part of preparations before her children arrive home once the days are chosen. Among many preparations, she starts some of them in the summer. Ms. Kim, who does farming herself, plants cabbage and other vegetables used for kimjang in her house garden in around July. She plants cabbage, radish, chives, ginger, and carrot in early July and mustard leaves in end September and gather them in November just before gimjang. The table below shows the time and quantity of cabbage, other vegetables, and grains Ms. Kim planted and gathered for gimjang in 2013. She plants vegetables used for kimjang in the “best spot of her garden to grow good and tasty vegetables.” When her husband was alive, Ms. Kim and her husband used to do growing, harvesting, and after-harvest treatment of chilli, sesame, and other vegetables together with the utmost care. Now, her sons and daughters in law help her conduct kimjang although she does growing and harvesting alone.

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4_ Sung-mi Jung (Graduate School of Chonbuk National University) examined gimjang by Ms. Kim's family.

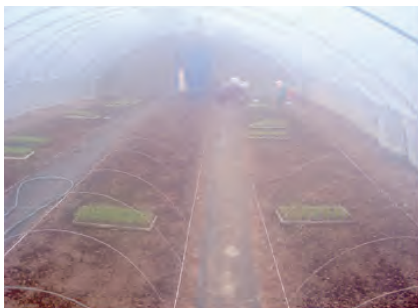
No.	Name of main ingredients	Quantity of ingredients	Note
1	Cabbage	500-600 heads	Planted in early July, harvested in November
2	Radish	Approx. 80	Planted in early July, harvested in November
3	Cabbage root	Approx. 80	Same with cabbage
4	Chives	2-3 bundles	Planted in early July, harvested in November
5	Green onion	2-3 bundles	Moved after planting
6	Ginger	Over approx. 2 geuns (approx. 0.6kg)	Planted in earl July, harvested in November
7	Carrot	Approx. 200	Planted in early July, harvested in November
8	Mustard leaves	3 bundles	Planted in late September, harvested in November
9	Water parsely	5 bundles	Purchased (Imsil market)
10	Sweet rice	2kg	Planted in May when rice seedlings are transplanted, harvested in end October
12	Chili	5 geuns	100 geuns of chili power if ground
13	Sesame	1 big caldron	Planted in May, harvested in August, roasted in a big caldron in November

As mentioned above, the scale of kimjang of Ms. Kim' family is way beyond the average because she gives large quantities of kimchi for her children who live in other regions. Her children cite several reasons for their coming a long way to their mother's home to participate in kimjang. First, kimchi made by their mother is unmatched by that of any others in terms of taste; second, they do not need to worry about hygiene or unhealthy additives because they make kimchi with the ingredients their mother grew by herself; third, they can save the cost because most ingredients are grown by their mother; and four, their mother's home in a rural village has a yard and floor wide enough for all family members to gather to make kimchi while there is no such space in their apartment. Besides, each of them may have their own reasons. Mothers consider giving kimchi as an expression of their love for children whereas children regard helping their mother for kimjang as an act of filial piety. Moreover, mothers may ease their concerns

about securing kimchi to eat throughout the winter, are satisfied with the fact that their children can eat kimchi made of healthy ingredients, and take kimjang as an opportunity to express their care for parents of their sons and daughters in law while children have an opportunity to care for their parents as well as their own parents in law. These motivations are all intertwined in carrying out the ritual of kimjang in a grandiose manner.

Ms. Kim is busy distributing kimchi once kimjang of 600 heads of cabbage is completed. She tended to make kimchi in larger quantities than others did in the past. The scale has grown even further from a few years ago due to her sons and daughters asking for more kimchi, citing different reasons. The first son and his wife said, “We eat three meals a day at home”; the second son and his wife, “We recently bought additional kimchi refrigerator”; and the last son and his wife, “We need more kimchi to give it as present.” They notified Ms. Kim that they would take two to three tongs of kimchi more than they had gotten in the year before(2012)⁵. She goes to the trouble of sending kimchi to her last daughter who does not have a kimchi refrigerator. Still, she is not annoyed with it. Besides her sons and daughters, she has cared about their parents in law from some time ago. Her first daughter shares her kimjang kimchi with her mother in law who lives alone. Sometimes, her daughters in law take some kimchi for their own parents, too. The scale of kimjang by Ms. Kim has thus increased as the scope of people to share kimchi has continued to expand.

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5_ ‘Tong’ refers to standardized plastic container for kimchi refrigerator. One tong contains approximately eight heads of cabbage of average size.



Planting chili seedlings



Selecting chili for kimjang
(by Ms. Kim and her husband)



Part of salted and washed cabbages



The first son smiling at the stuffing



Spreading the stuffing
(by women of the family)



Putting kimchi into kimchi tongs, and loading
them onto cars (by men of the family)

Kimjang by Ms. Kim's family: Sons and daughters in law were all called
(source: photographed by Sung-mi Jung).

Her first son took 14 (big) tongs of kimchi for kimchi refrigerators and 6 (small) tongs of kimchi for general refrigerator; the second son, 14 big tongs and 4 small tongs; the third son, 10 big tongs and 4 small tongs; the first daughter, 16 big tongs and 4 small tongs; and the last daughter, 5 small tongs. Ms. Kim set aside 8 tongs of kimchi at home.⁶ This included a reserve for her sons or daughters to take in case they run out of kimchi. After distribution is completed, they load their kimchi onto their car or use parcel delivery service if the space is not enough. The annual kimjang events held by mothers in rural villages, including Ms. Kim and children in cities cause traffic congestion while creating unusual demands for parcel delivery service by the post office and other private companies. Movements of people and kimchi during the kimjang season are already well known.

·Ms. Yoon's family(Jangdong-ri, Sangseo-myeon, Buan-gun, Jeollabuk-do, examined in 2010)⁷

Ms. Yoon lives with her husband. Her two sons and one daughter all live in other regions. She was born in Buan in 1954 and grew up there and her husband, born one year earlier, was also born and grew up in a nearby town in Buan. They are not rich, but have little financial constraints since her husband runs a small business. They plant cabbage and radish for kimjang in their kitchen garden in the summer. In addition to cabbage and radish, they grow almost all vegetables for kimjang by themselves. What they buy are salt, jeotgal, water parsley, sea weed, anchovy, kelp, and other ingredients for seasoning. They buy most of the ingredients which are produced in Buan in nearby markets. For example, they use salt and baekhajeot(salted fermented small

6_ The unit to measure weight or mass of kimchi is a bit confusing. Usually, the number of heads of cabbage is used, but, after kimchi refrigerators were widely distributed, the number of containers of the refrigerator has been used in general. In this paper, one tong is equivalent to 12 liters and is marked as for four to five heads of cabbage. However, people usually put more than that into one tong. They put up to eight heads of cabbage if the size of the head is smaller. In the case of Ms. Kim's family, seven to eight heads can be put into one tong because cabbage of the variety she grows is smaller, but tastes better. She put at least eight heads of cabbage into each tong due to the urge of her sons.

7_ Gyeong-jin Lee used participant observation to examine gimjang by Ms. Yoon's family in 2010.

shrimp) produced in Gomso and buy water parsley, sea weed, anchovy, and kelp in traditional markets in Buan.

Kimjang of Ms. Yoon's family is also interesting. From three years ago, Ms. Yoon and her younger sister have conducted kimjang together. This system of collaboration is likely to continue for the time being. Her sister and her sister's husband come to Ms. Yoon's home from Jinhae, Gyeongsangnam-do where they live. This became possible after her sister's husband had retired. Previously, it was impossible for them to travel together to participate in kimjang. They participated in kimjang in 2010, but the children of neither Ms. Yoon nor her sister came. Still, they made kimchi with the utmost care and sent it to their children using the post office's parcel delivery service.



Kimjang by Ms. Yoon's family: Washing salted cabbages, spreading the stuffing, putting kimchi into containers, tongs to be sent to children (source: photographed by Gyeong-jin Lee, 2011).

Ms. Yoon and her sister made kimchi with 150 and 80 heads of cabbage, respectively because Ms. Yoon's family is larger. She sent kimchi to her married first son and first daughter, who live in Jeonju and Wanju, respectively. Both are in their early to mid 30s.

However, she did not send her last son who work in Busan and is in his late 20s and not married. Her sister used the delivery service, too to send kimchi to her sons and daughters.

· Ms. Ha's family (Noam-dong, Namwon-si, Jeollabuk-do, examined in 2010)⁸

Ms. Ha has four children: first two are daughters and the rest are sons. When the research was conducted, her daughters were in their mid to late 20s, the older son was a university student and the younger one was a high school student and none of them was married.⁹ Ms. Ha was born in Namwon in 1959 and married to her husband in 1983 who was also born in Namwon. They have lived there since being married, but their children moved to other regions to continue education or work. Her mother moved into her house a few years ago.



Spreading the stuffing on the fourth day of Kimjang by Ms. Ha's family (source: photographed by Semina Oh).

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8_ Semina Oh and Gyeong-jin Lee examined kimjang by Ms. Ha's family together using the participant observation method in 2010.

9_ The scale of Kimjang is expected to change because Ms. Ha's two daughters were recently married. Thus, we plan to re-examine kimjang by Ms. Ha's family.

In 2010, Ms. Ha made kimchi with 463 heads of cabbage. When her mother in law was alive, she and her mother in law grew cabbages for kimjang by themselves. She has bought cabbages since her mother in law died. Ms. Ha sometimes receives cabbages from her husband's friends who do farming in Ayeong and Inwol. In 2010, she received 450 heads of cabbage and 100 radishes from them and bought 13 heads of cabbage in Namwon market additionally since she felt 450 heads were not enough. From preparation to completion, kimjang took total four days, including the weekend(December 4-7). The weekend was included to seek help from her husband and a daughter, who works for a company and goes to school during the weekdays. There were total 11 participants: Ms. Ha and her husband, mother, and the second daughter, and seven women who live in the same village. She saved kimchi for her own family and distributed the rest to friends and relatives, including her husband's elder sister(Pohang, A 1 big tong of kimchi), her husband's friend(Seoul, 4 big tongs), her friend(Seoul, 2 big tongs), her younger sibling(2 big tongs), her friend(Busan, 2 big tongs with 15 heads of cabbage).¹⁰

Her children were all excluded from the list of recipients since they were not married. It appears that someone is not eligible for receiving kimchi unless he/she is married. Ms. Ha's sons and daughters come to Ms. Ha's home to take kimchi if they need it even though they live in other regions.

IV. Meanings of Kimjang

Reproduction of the concept of family

There have been efforts to figure out the correlation between nuclear families and industrialization. A prominent sociologist William Goode suggested a hypothesis that nuclear family is an appropriate form in



10_ 15kg is equivalent to a one tong of kimchi for kimchi refrigerator.

adapting to an industrial society in diverse aspects(Dawn Hee Yim, Janelli 2002: 321-322 as cited in Goode 1964: 108-109). According to Goode, as society were industrialized, extended families of the past were regrouped into nuclear families. Extended families which put priority on human relations under the social status system were increasingly considered inefficient in industrial societies, giving rise to nuclear families centered around wife and husband which could easily move across classes or regions, he argued. Korean families appeared supportive of the nuclear family hypothesis in the view of demography. However, some insisted that there were more factors than industrialization behind the emergence of nuclear family in Korea and the nuclear family theory must be revised through understanding of the family life cycle, historical backgrounds of industrialization, and cultural factors of a family(Boo Jin Park 1994; Eun Hee Kim 1993; Dawn Hee Yim, Janelli 2002). For example, it is inevitable for the first son's family to have a separate residential place to live in a city as they move from their parents' home in a rural village.¹¹ There are many other conditions under which it is difficult to maintain an ideal form of immediate family. Still, we cannot conclude that the thoughts and behaviors of parents in a rural village or children who moved to a city have changed immediately. When the first son and his family decide to live apart from their parents, they consider the resultant form of family centered around husband and wife(nuclear family) only provisional. Some even argue that immediate families by blood are still being maintained in modern society, pointing to the fact that the sense of 'one family' or 'our family' lasts. In this regard, some claim that the diverse forms of Korean families in present time represent changes not in the structure of family, but in the composition of family(Hye-Sook Kim et al. 1999). Despite changes in the form of family, members of Korean families may have internalized cultural traditions passed down from their ancestors(Boo Jin Park, 1994: 193).

11_ Nevertheless, some contend that it is hard to conclude that the principle of immediate family collapsed because the ratio of married couples cohabiting with their parents is relatively high. HS Jang, 「Are Nuclear Families Increasing in Korean Society?: Basic Study for Development of Family Policy」, 『Society and History』 Vol. 39. The Korean Sociological Association, 1993.

As shown above, universality of nuclear family which has become an influential hypothesis in sociology and anthropology is now seriously contested. The argument for disbanded traditional family also faced a call for reexamination. Immediate families may seem disappeared when considering cohabitation only; but, Korean families still lead their lives through communal ways of life in such areas of child care, memorial service for ancestors, inheritance, and financial interdependence(Kim Hye-sook, et al. 2005). Families with these ways of live appear an altered form of immediate families and dubbed as ‘one family,’ ‘our family,’ or ‘regionally extended family(Boo Jin Park 1994; Dawn Hee Yim, Janelli 1995, 2001, 2002)

The sense of ‘regionally extended family’ manifests itself in the form of kimjang. The three cases above show that parents and children who live far away from each other gather as members of ‘our family’ for from one day at shortest to four days and three nights at longest to conduct kimjang. Previously, kimjang was an annual event conducted by each family living together. However, it has become a ritual of a regionally extended family thanks to the help of advanced transportation and telecommunication methods and the emergence of kimchi refrigerator. At this point, there is a need to understand the modern ritual of kimjang conducted based on the traditional concept of family and practicality. The rise of commercially produced kimchi has happened to promote the ritual of gimjang. I will elaborate on this in the next section.

Inheritance: Economic and cultural negotiations through kimjang

The previous section showed that, in principle, gimjang works based on the ideals of regionally extended family. This gives rise to a question over the relation between the current practical attempts to break free from or subvert the ideals of traditional family and inheritance of kimjang. I will put focus on the actual phenomena associated with inheritance of kimjang. Because the structure of inheritance is more of a concept, rather than of practice, it is difficult to capture the changes

occurring in the structure. It is thus important to know the dialectic process of ideals and practices to understand the actual phenomena.¹²

The ritual of kimjang can be understood as a process to realize the ideals of extended family and pass them down. The antinomy that the ritual of kimjang reemerges as the ideals of patriarchal family are considered nominal by the young attests to the actual existence of patriarchal extended family. Sons and daughters in law who live in city are called to the parents' home in confirmation of the sense of family community. Through kimjang, not only kimchi but other grains and vegetables are distributed to children, who give their parents cash as a gift in an expression of their filial piety. This exchange is an occasion for parents to rebuild their authority to some extent. Young daughters in law are less resistant to kimjang which is an occasion for mutual exchanges than to national holidays when they tend to be demanded to make sacrifice unilaterally. This is why parents in a rural village put so much importance on kimjang and grow vegetables for kimjang with the utmost care. In the meantime, kimjang is an important occasion when mothers' skills and knowhow turn into inherited knowledge of a family with the taste unique to the family being passed down to children's generation. In most cases, the taste is not what has been handed down through several generations, but a result of mother's accumulated knowledge. Yet, the taste is idolized and passed down through kimjang.

One of the factors of kimjang which reinforces the sense of community of extended family is its cost saving potential and practicality. Daughters in law living in city cannot but participate in kimjang even if they do not want it due to the hard work given that, by doing so, they can stand the winter without concerns for kimchi and relieve their financial burden. Of course, daughters in law can make kimchi by themselves or buy some at a market, both of which they consider worse than 'receiving' or 'taking' kimchi from parents in

12_ Some may believe only reality matters. Conceptual principles still matter because they are the basis of behaviors. Anthropologists have long debated over idealism versus realism.

law. Conducting kimjang by themselves will put a significant burden on them even if in smaller quantities and buying some at a market is no less burdensome. Kimchi made by parents in law not only reduces their financial burden but also addresses their health concern since such kimchi does not contain pesticides or unhealthy food additives. Besides, families 'receiving' kimchi still appear culturally superior to those 'buying' kimchi to the view of others.

Some once predicted that homemade kimchi would soon disappear on the rise of kimchi products sold at markets. However, consumption of kimchi products dwindled as they were less tasty, but more expensive than homemade kimchi and kimchi refrigerator was introduced. Mass-produced kimchi was distributed through supermarket chains and gained popularity from the 1990s. Mass-produced kimchi was a convenient product-it reduced the work required to make kimchi at home, guaranteed a certain level of taste and hygiene, and could be purchased at anytime. With the average consumption of kimchi continuing to fall, the popularity of packaged kimchi went up further since it was sold in small quantities and consumers could pick it up whenever they need and choose from a variety of kimchi. However, the popularity began dwindling at some point for several reasons. Kimchi products were expensive and less tasty and the introduction of kimchi refrigerator was a game changer. All of the sons and daughters of Ms. Kim, Ms. Yoon, and Ms. Ha have a big kimchi refrigerator and the second son of Ms. Kim bought an extra one before the kimjang season had begun in the last year. Once kimjang is completed at Ms. Ha's home, allocation begins and so does competition between sons to take more kimchi. With daughters in law standing aback, sons ask their mother to pack their containers with kimchi as fully as possible. This is why the scale of kimjang by Ms. Ha's family has increased in recent years.

In city, they can buy kimchi in small quantities at a market. However, buying kimchi in quantities large enough to fill all containers of a kimchi refrigerator costs a lot of money and the taste is not appropriate

for preservation. They then seek homemade kimchi in the end. Women of younger generation, whether they are daughters or daughters in law, participate in the ritual of kimjang led by their mother/mother in law for cost saving, better taste, increased hygiene, and healthiness. Women in their 30s hardly reproduce the taste of kimchi made by their mothers because the taste is a result of years of experience and kimjang demands impromptu reaction based on traditional knowledge and long experience. Therefore, more than half of women depend on their mother or relatives in their 50s or 60s for kimchi(Ju Hyeon Kim, Hei Ryeo Yoon 2012: 301). It will take time for daughters and daughter in law in their 30s or 40s of Ms. Kim and Ms. Yoon who are in their 60s to become able to make kimchi by themselves. When they reach the 50s or 60s, they won't be able to depend on their mothers. Ms. Ha will soon have to lead her daughters and daughters in law for kimjang even though her mother in her 80s has led the process since Ms. Ha mother in law died.¹³

This reminds me of the necessity for a long-term follow up study of each family to understand the inheritance structure of kimjang. A synchronic and macroscopic study alone cannot ensure a full understanding of the structure and may easily induce misunderstanding of the structure.

13_ Probably, the ratio of mothers aged 60 or older who lead their daughters and daughters in law for gimjang will fall in the future. At present, there exist women in their 50s or 60s who depend on relatives for kimchi or buy it even in small ratios. JH Kim, HR Yoon, 「A Survey on the Nationwide Customers' Usage of Kimchi Consumption.」 『The Korea Journal of Food and Nutrition』 Vol.25 No.2, The Korean Society of Food and Nutrition, 2012, p301.

V. Conclusion

I attempted to find an answer to the question why kimjang has continued into the modern era through case studies. Despite the statistics suggesting a rise in consumption of kimchi products, kimjang continues to be an important annual event of a family. Some point to the symbolic nature of kimchi and others say Koreans cannot but eat kimchi practically from the view of food ecology. Rice and kimchi may be emphasized as the staple food of the Korean diet. However, they are not sufficient in understanding the inheritance structure of kimchi or kimjang because kimchi is available throughout a year even if we do not make it by ourselves. In summary, this presentation is aimed at proving that the ritual of kimjang is performed through the sense of 'our family' or 'regionally extended family' and maintained through negotiation between cultural ideals and practical necessities.

The conceptual relation between father and son is materialized through memorial service to ancestors on national holidays among others. Kimjang is a more interesting and meaningful phenomenon which highlights relations between the generation of parents and that of sons and daughters. Odd negotiation and competition associated with kimjang occur between a mother and her daughter in law, and between a son and a daughter. Admittedly, there are attempts among young couples living in city and especially daughters-in-law to resist or subvert the patriarchal order. It has become a custom for them to visit their own parents' home immediately after completing the memorial service at the home of parents-in-law. Nevertheless, when kimjang is conducted, the ritual of regionally extended family is revived in a way that the patriarchal order or the authority of mother-in-law is restored from the brink of collapse. The cause is probably a complex interaction of cultural and practical factors mentioned above.

<2014 Kimchiology Symposium> field sketch







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