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## Untold story about why King Sejong invented the Korean alphabet\*

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### Abstract

HunMinJeongEum, meaning "the right sound to teach the people," was created in 1443 CE by King Sejong the Great, the fourth king of the Joseon Dynasty. In today's modern language, this letter, called Hangeul, is internationally recognized for its linguistic science. However, it is hard to find a comprehensive study on the fact that King Sejong himself created Hangeul, the Confucian perspective on natural disasters and democracy revealed in the process of writing, the independent efforts emphasized from a certain period, and the achievements of King Sejong, who shared the sorrow of the people and carried out national policies despite the extreme opposition of the nobility. Accordingly, I analyzed the consonants of HunMinJeongEum and looked at the essence of humanity and oriental philosophy (Yin-Yang Five Elements, Sangsu Philosophy, Hado). Surprisingly, different meanings from previous studies and interpretations were found, and King Sejong's "Da Vinci Code," which was left behind in the process of making the consonant, is reinterpreted and revealed. King Sejong's achievements were all connected as one. This is the root of democracy in the Republic of Korea today, and this is why King Sejong was selected as the most beloved and respected historical figure by the Korean people. This study will start with more people's understanding of the fundamental perception and philosophy of the world in Asia, including Korea, to reinterpret and reveal the hardships and great achievements experienced by a leader of a country in the process of creating Korean alphabet, and to emphasize democracy, which is an important value for Asians and Westerners' mutual respect and co-prosperity.

**Keywords:** HunMinJeongEum, King Sejong, Humanism, Geography, Climate crisis

**Major classifications:** Language Literature History

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### 1. What is HunMinJeongEum(Korean alphabet)

HunMinJeongEum is a character that all linguists around the world continue to study. In addition, UNESCO established the King Sejong Literacy Prize (Lee, 2019) every year in 1989 and has been awarded to people or organizations that have

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contributed to eradicating illiteracy in the world since 1990. HunMinJeongEum is a letter that explains the philosophical background and principle of enacting the meaning and text of creation through the spirit of the people, which is the basis of today's national democracy in South Korea. In other words, it is the only letter in the world in which philosophical backgrounds, reasons, principles, and humanity remain intact as records. The principle of creating HunMinJeongEum includes the philosophy of "Sangsu(象數)," the idea of "Hado(河圖)," the idea of "Yin Yang Five Elements(陰陽五行)," the Sky(天)-Earth(地)-Man(人) law called in the East for "Samjae(三才)," and the principle of repeating and circulating four seasons of nature cycle. HunMinJeongEum emphasizes the value of middle sound in the correlation between the initial sound representing heaven and earth and the middle sound representing human beings. As a being that connects heaven and earth, and as a being that completes the last puzzle when thinking of heaven, earth, and human beings as the whole world, King Sejong valued human value the most and contained human natural rights as an equal being in front of God. In fact, when Sejong produced HunMinJeongEum, he created middle sound (human), that is, vowels first and made initial sound and final sound later. Middle sound (vowels) ‘•, 一, |’ came out in the shape of 'Sky-Earth-Human' respectively, which are called the basic characters (basic letters; basic forms) of the vowels. After that, eight middle sound vowels were created according to the law of Samjaejido, 'Sky(天)-Earth(地)-Human(人)'. This is called the ChoChuJja(初出字) and JaeChulJa(再出字) of vowels. The former means the beginning letters, the latter means the re-using letters. Depending on how the vowel basics are combined with each other, ChoChuJja and JaeChulJa are created. To understand this, it is necessary to look at the ancient philosophy of the Orient, 'Sangsu' philosophy' and the idea of "Hado."

King Sejong made vowels, then consonants, and clearly revealed the ancient Confucian philosophy of the East, Five Elements ideology, gradually increasing autonomy, democratic humanity, and linguistically phonological science. Most importantly, in 1443, when the caste system existed in Joseon Dynasty(朝鮮), a monarch of an Asian country learned Science of Changes(As a field of oriental philosophy, the study of all things in the universe identified by the order of Yin and Yang), phonology, and Fengshui(anthropography) himself, hoping that the low-class people would not suffer from unfair treatment because of illiteracy. Historically, the relationship between political power and cultural power has rarely been harmonized in that what they seek always conflicts. This is because if culture exerts a microscopic power that enhances the life of an individual human being, political power pursues a macroscopic power to control it. If political power is too dominant, cultural power is parasitic on it, thereby losing the cultural identity that cultural power should have. Cultural power thus constantly tries to exercise its cultural capabilities to escape it, and in the process, conflict becomes inevitable. King Sejong's creation of HunMinJeongEum is the case where political power and cultural power have most perfectly embodied one ideology through "happy meetings." Literature was not created because it was parasitic on political power, but it was actually created from the needs of the people's lives, and surprisingly the most political power led it. This surely can be compared to the happy encounter of the powerful political power of Medici and the cultural power of various artists in the Renaissance that blossomed the Italian Renaissance. (Song, 2018) King Sejong has become the most respected and loved historical figure by Koreans today, 600 years after its creation, and it is not well known at home and abroad that the principle of HunMinJeongEum is reflected in the principle of naming all Koreans still, and the keyboard arrangement of electronic devices (smartphones, computers) used by Koreans. Throughout the entire life of one monarch, I was able to confirm the democracy, philosophy, and science contained in HunMinJeongEum, and confirmed that this still affects the entire social culture of Korea. In the process of confirming these characteristics, this study discovered hidden contents about the creation of HunMinJeongEum(Hangul) consonants that have not been established so far, and this is to be revealed in view of the overall context for the first time with this study. Furthermore, by revealing the language of Koreans and the value of Korean, to understand the Korean Wave recently and Korea as part of the world's citizens, and I intend to contribute to the coexistence and harmony of the East and the West by understanding the Korean Alphabet.

## 2. Background of creation of HunMinJeongEum

The term HunMinJeongEum means "right sound of teaching people," which was created in 1443 by King Sejong, the fourth monarch of Joseon. It is designated as both National Treasure No. 70 and the UNESCO World Heritage Site. In other words, HunMinJeongEum is a Korean language spoken by Koreans, the first HanGeul, and the "Alphabet" of Joseon. At the end of the 19th century, linguist Ju Si-gyeong(周時經) called HunMinJeongEum as "HanGeul," meaning "great and one-man writing," and it has been handed down as the Korean letter. King Sejong was good at studying philosophy books and Chinese characters in the East since he was young, and he was particularly interested in phonology and astronomy. Early on, he learned the academic system of Neo-Confucianism, which systematically integrated the ideas of Yin and Yang based on Neo-Confucianism, the natural philosophy of East Asia. (Lee, 2014) As a result, the founding of Joseon was stable by laying

the foundation for a constitutional state that respects CheonDo(天道)'s ideas and YeAk(禮樂)- the Ye(禮) and Ak(樂) have more meaning than abstract slogans, and are realistic and specific facts essential for order and harmony. If Ye was for order, Ak was for harmony, and Joseon's previous kings ruled the country based on this principle of rule.

The attitude shown as the father of the state is revealed in addition to the creation of HunMinJeongEum. After hearing DongNae's government official Jang Yeon-sil's tricks, King Sejong gave him the opportunity to create various inventions, including astronomical instruments such as army sphere, water clock, and borugak jagiongnu. In addition, King Sejong, who highly regarded his talents, liberated him from the status of a servant and granted him a government post, and throughout the Joseon Dynasty, this was the first time that a servant (peasant slavery) first gained freedom and became a public official. Obviously there was also a great backlash from the ruling forces about this progressive order. Moreover, King Sejong compiled and distributed a book called NongSaJikSeol(農事直說), a farming method, and made test rice fields in the backyard of the palace and farmed himself so that farmers could make rice well in Joseon, an agricultural country. In other words, King Sejong was who studied and experimented with the spirit of love for the people and implemented policies for them. Phonology's sophisticated research, the creation of HunMinJeongEum, the research of Goje system, the writing of legal reform, making national geography, Yulrye maintenance, tax maintenance, and independent astronomical research for farming and power outage management, including Cheugui, have indeed made the independent academic foundation of Joseon solid. (Lee, 2014) In the 10th year of King Sejong's reign, when Kim Hwa of a province Jinju person, murdered his father, King Sejong ordered the publication of "HaengSilDo," which contains examples of dutiful son and loyalists. In this way, (SamGang)HaengSilDo, a picture is drawn along with what is intended to be conveyed, and it was King Sejong's consideration that allowed people who did not know the text to see and understand the picture. At this time, King Sejong left the following words for the first time.

"I put the picture because I was afraid that the foolish people would not know, but the people did not know the letter, so even if I distribute the book, if someone doesn't teach them, how can they know the meaning and be moved?" - April 1434 CE, 16th year of King Sejong's reign.

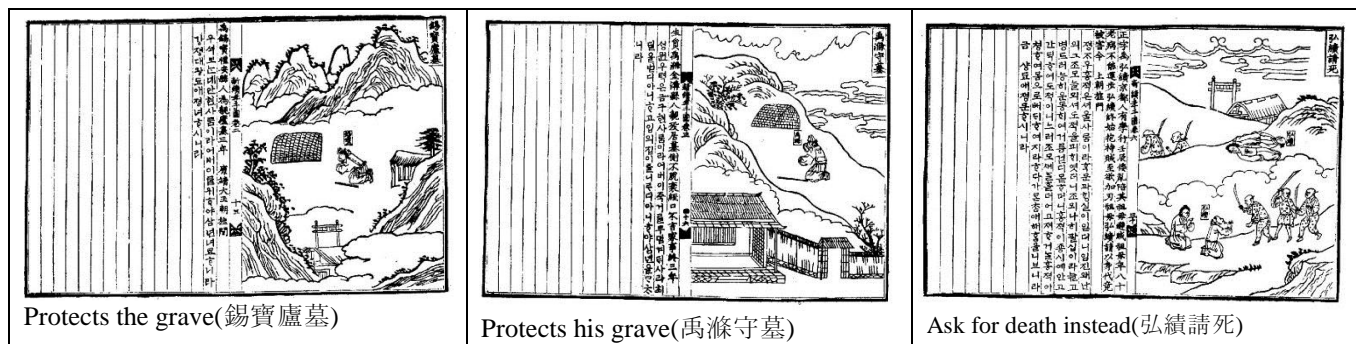


Figure 1: The Dutiful Son part, SamGang HaengSilDo

The words that stand out here are also 'letter' and 'foolish people'. It was the first reference to the need to create the Joseon Alphabet. The subjects of education for 'SamGangHaengSilDo' were women and children. Several "HaengSilDo" that came out after 'SamGangHaengSilDo' were all implemented by the state for the purpose of reforming the people. Hangul was used in the country's reform policy for the people. Another case in which anGeul was actively used in the nation's public policy is the King's EonMun(諺文) KyoSeo(教書) or YoonEum(綸音) to inform the people of the country's policy or to mandate the people. In particular, when the disaster was severe due to severe famine or infectious diseases and people's livelihoods fell into despair, there were several things that were distributed to relieve public sentiment: first, YoonEum(綸音) EonHae(諺解) has 31 cases in total, including the Korean textbooks of the ancestors. In each province, the king's order documents were translated into Korean and posted on the gateway or the streets lined up with shops so that local residents (low-class people) could see them, and second, King Sejong passionately held a ritual for rain in the sky because Joseon is indeed agricultural state. YoonEum(綸音) proclamation was the most suitable policy tool for the king to communicate with the people. From the perspective of this paper, YoonEum(綸音) proclamation can be regarded as a constant embodiment of the democracy of HunMinJeongEum in the Confucian framework of political reform, which can be said to have great historical value as the king has a democratic character to communicate with the people under the premised dynasty system. Ten years later, the preface to HunMinJeongEum made by King Sejong begins like this.

**Table 1.** The preface of HaeRye, HunMinJeongEum

	<p>國之語音 異乎中國 與文字 不相流通。故愚民      有所欲言而終不得伸其情者 多矣 予爲此憫然 新制二十八字      欲使人人易習 便於日用耳</p> <p>The national language is different from Chinese, so it is not compatible with the characters, which is why many foolish people are not finally able to say what they want to say. I feel sorry for this, so I make a new 28 characters, so everyone wants to learn it easily and make it easier to use.</p>
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HunMinJeongEum, created by King Sejong due to the strong and continuous opposition of his servants 'high class aristocrats' in the struggle for political power, was not eventually compiled into a book of King Sejong's regime. It was later published and distributed as a book during the reign of King Seongjong (9th king of Joseon). Why did the nobles try so hard to deny, oppose, and prevent the spread of the alphabet created by King Sejong? Prior to the creation of HunMinJeongEum, the Yangban intellectuals and the Chungin, the upper middle class of the Joseon Dynasty in medieval and early modern Korean society. The name "Jungin" directly means "middle people", led their literary lives by using Chinese characters, and translated Idu script. (Kang, 2021) However, women, Yangin (良人), and low-class people were not given the opportunity to learn Chinese characters, so most people were completely excluded from the use of Chinese characters. (Paek, 2016; Park, 2013) The ability of the ruling class and the middle class, including Yi Seo, to use Chinese characters was a symbol of the ruling privileged class and a sign of social authority. In order to protect the class interests of the privileged and to make it easier for the ruling class to dominate the lower, it was surely not easy for ordinary people of low rank to access public documents. Under these circumstances, King Sejong decided secretly to create a new letter (Paek, 2016), HunMinJeongEum, which could be used by both Yangin and the lower class, for the social class where the use of Chinese characters was excluded at that time. HunMinJeongEum was made of letters for the people from birth, and most of the policies implemented by King Sejong at the time focused on improving people's lives. The conquest of Tsushima Island and YukJin and the migration of residents were designed to promote the security of the people by strengthening national defense, and major policies given by King Sejong, such as publishing books of agricultural, morals, and medicals, producing astronomical equipment such as Borugak Jagyeongnu and CheugUgi, casting of metal movable types, and tax reform, were implemented with the aim of stabilizing the people's livelihood and enhancing the welfare of the people. (Paek, 2016) The creation of King Sejong's HunMinJeongEum also shares policies and political motives for people's livelihoods. (Kwak, 2016) The democracy that was mentioned at the time of its creation should be noted as an important aspect of the political consciousness of the time. The political consciousness of the people (ruling class) grew through the late Goryeo Dynasty and the early Joseon Dynasty, and this was converged into democracy ideas. The policy realization of the democracy idea(民本思想) led to the creation of HunMinJeongEum. (Paek, 2016) The word democracy(民主) means that ordinary people are the owner. The democracy of HunMinJeongEum means the nature of the characters in which the people are mastered, as the meaning contained in the Democratic(民主). I think this is the most valuable feature of all the values of HunMinJeongEum. Because it is the basis of Korean national democracy today. In March 1420 CE, King Sejong established the Hall of Worthies to promote learning and respect writings. King Sejong came to the Hall of Worthies(集賢殿) whenever he had time to talk to officials and sometimes engage in heated discussions. Under the pretext of discussion, King Sejong carefully examined whether scholars had any inconvenience in their lives, and if there was anyone studying late at night, he sent a night snack to fill their hunger. The longest-running debate in the process of making HunMinJeongEum was "Did King Sejong make the Joseon alphabet by himself or with scholars of the Hall of Worthies?" However, considering the historical records and circumstances of the times, it was impossible for King Sejong to create the alphabet with other scholars, the nobles. This is because shortly after the creation of HunMinJeongEum, there were a lot of appeals against the subjects. "Even if you have to make Hangul, you should discuss it widely from the ritual to the servant, but I don't know if it's the right thing to do because you're suddenly trying to publicize it."- Former scholars Choe Manri(崔萬理), Shin Seokjo(辛碩祖), Kim Moon(金汶), and Jung Chang-son(鄭昌孫)'s appeal.

Scholars of the Hall of Worthies condemned the creation of HunMinJeongEum as King Sejong's arbitrary act in an appeal. Even Choe Manri and Jung Chang-son, who were the heads of the Hall of Worthies, had no idea about the creation of HunMinJeongEum, and Seong Sam-mun, who later participated in the ritual work of HunMinJeongEum, was also in Japan at the time of the invention. There is no historical record that the Hall of Worthies's scholars participated in the creation of HunMinJeongEum. HunMinJeongEum HaeRye, the oldest existing book related to HunMinJeongEum, is written



as follows. "Our Highness created 28 JeongEum characters, briefly holding Yeah Ui(例義), and named it HunMinJeongEum. Although modeled after the figure, the letters are similar to classics, and the notes follow the sound are in the seven notes(七調), and both the meaning of SamGeuk(Sky-Earth-Human) and the strangeness of Yin and Yang are included. With these 28 letters, the conversion is endless, simple, useful, precise, and connecting, wise people can learn before the end of the day, and even foolish people can learn in 10 days." - Among the preface of Jeong In-ji. (Song, 2018)

Shortly after the creation of HunMinJeongEum, the servants' appeals against it poured out. Today, some people may suspect that their servants (scholars) actually made HunMinJeongEum, but they attributed it to the monarch. However, the scholars, who were linguists at the time, thought that making HunMinJeongEum was rather profane. "This is a new and extraordinary skill that hinders our studies and does no harm to politics. No matter how hard you think about it, nothing is right. How can you correct the old harmless letters and write a new letter that is low, vulgar, and not profitable?" In fact, their opposition was fierce, and after arguing with them, King Sejong even put all the linguists, nobles, in prison. The historical record of the time, "HaeDongJapNok(海東雜錄)," shows the following as: "The scholars of the Hall of Worthies testified strongly, but King Sejong did not listen, so they all went back to their respective houses and the Hall of Worthies was empty. King Sejong approached Hwang Hui(黃喜) in tears and said, "Many scholars abandoned me, so what should we do in the future?"

Aside from the elder scholars from the Hall of Worthies, King Sejong ordered other scholars of the Hall of Worthies to interpret the principles and examples of the alphabet. This is HunMinJeongEum 'HaeRye'. In summary, King Sejong created HanGeul himself, and when powerful aristocrats protested, he ordered other nobles who followed King Sejong, who were compatible with him, to be involved in the 28-character "interpretation" and "publishing" project. In that way, the background of the creation of HunMinJeongEum and the interpretation book HaeRye were born.

### 3. The composition and contents of HunMinJeongEum

The HunMinJeongEum is largely divided into parts created by King Sejong and translated by scholars of the Hall of Worthies. Its composition and contents are as follows.

**Table 2:** The composition and contents of HunMinJeongEum

1) EoJe <sup>10)</sup> (御製)	① Preface(序文)	The motive and reason for the creation of the new letter, the creator, the content of the creation, and the purpose of the creation.
	② Yeah Ui <sup>11)</sup> (例義)	It shows the pitch of 23 Initial Sound and 11 Middle Sound Characters, and explains the ByeongSeo law(竝書法), YeonSeo law(連書法), BooSeo law(附書法), SeongUm law(成音法), SaSeong law(四聲法).
2) HaeRye <sup>12)</sup> (解例)	① JeJa Commentary	Explain the method and characteristics of disciples of 23 Initial Sound and 11 Middle Characters.
	② Initial Sound Commentary	Describe the concept of Initial Sound, how to use it, speech characteristics, et
	③ Middle Sound Commentary	Describe the concept of Middle Sound, how to use it, speech characteristics, etc.
	④ Final Sound Commentary	Describe the concept of Final Sound, how to use it, and speech features
	⑤ HabJa Commentary	How Initial Sound, Middle Sound, and Final Sound are combined to indicate syllables, and the type and characteristics of points that indicate intonation.
	⑥ YongJa Rye	It shows examples of unique words using 17 Initial Sounds, 11 Middle Sounds, and 8 Final Sounds.
	⑦ Jeong In-ji Preface	The Reason for Creation of HunMinJeongEum, Excellence of HunMinJeongEum, Writing of HaeRye. Revealing the circumstances and the author, honoring the greatness of King Sejong.

HunMinJeongEum is composed of EoJe(御製) and HaeRye(解例). The word EoJe literally means "Written by the King", which consists of Preface(序文) and Yeah Ui(例義) and they are written by King Sejong. HaeRye consists of ①JeJaHae, ②ChoSeongHae, ③JungSeongHae, ④JongSeongHae, ⑤HapJaHae, ⑥YongJaRye and ⑦the Preface of Jeong Inji written by

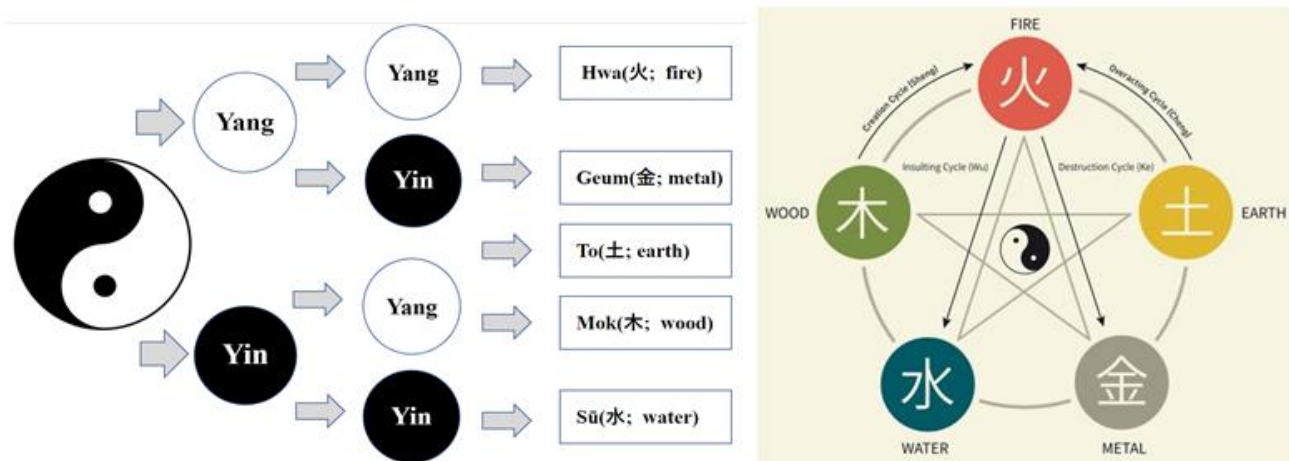
the nobles (Scholars of Jiphyeonjeon). (Kim, 2019; Shin, 2010; Kim, 2018) In the Preface of EoJe, King Sejong first explained the reason for the creation of new letters (1) because the people could not understand the meaning of the Chinese characters because they did not communicate with each other because Korea's promissory notes are different from China. He explained the reason for the creation of HunMinJeongEum and said, "I (King Sejong)," "I felt sorry for this," and "I created a new 28 characters (creative content)." In other words, it even explained the purpose of creation of HunMinJeongEum, which refers to the creator, motive for creation, and content of creation, and that each person wants to learn new characters and use them comfortably in daily life. (Kim, 2019) Yeah Ui of EoJe, which corresponds to the main text of HunMinJeongEum, is divided into the front part showing the sound of HunMinJeongEum and the back part explaining how to operate it. In the previous part, the phonetic values of the initial sound (consonants) and middle sound (vowels) were first shown. The initial sounds were 23 characters, including Ah 'ㄱ, ㅋ, ㆁ, ㅇ', Seol 'ㄷ, ㅌ, ㅓ, ㅗ', Soon 'ㅛ, ㅜ, ㅝ, ㅛ', Chi 'ㅈ, ㅊ, ㅉ, ㅈ', Hoo 'ㅎ, ㅅ, ㅆ, ㅇ', BanSeol 'ㅅ', and BanChi 'ㅈ', and showed the pitch of each letter. Middle sound (vowels) sequentially presented 11 characters, including the basic 'ㅏ, ㅑ, ㅓ', the ChoChulJa 'ㅕ, ㅗ, ㅛ, ㅜ, ㅝ', and the JaeChulJa 'ㅛ, ㅜ, ㅝ, ㅞ'. The latter part shows how to operate the newly created characters. First, he explained that the letter JongSeong(終聲) was called JongSeong Bu Yong ChoSeong(終聲復用初聲)" and that JongSeong did not create a new one, but used the initial letter again. In addition, various methods of using the initial, middle, and final sound were described. It explained the "ByeongSeo method" of writing two or more characters side by side, the "YeonSeo method" of attaching "ㅇ" below Soon notes, the "BooSeo method" of collecting initial letters, middle, and final letters in syllable units, and the "SeongUm method" of combining letters to form notes. Finally, the 'SaSeong method' was explained, which focuses on the left side of the letter and displays the tone. The middle were divided into the 'ㅣ' series ('ㅣ, ㅓ, ㅗ, ㅛ, ㅜ, ㅝ') and the 'ㅡ' series ('ㅡ, ㅑ, ㅓ, ㅛ, ㅜ, ㅝ'), and the 'ㅣ' series used the initial and the final consonants to the left and bottom of 'ㅣ', respectively, and the 'ㅡ' series used the initial and middle to the top and bottom of 'ㅡ', respectively. In this way, the fact that the initial and final consonants were used according to the sequence of the middle consonants suggests that they were created first when creating letters, and then the initial consonants were created. In other words, vowels (the middle) were devised before consonants(the initial and final). (Kim, 2019) The Neo-Confucian theories seen in HunMinJeongEum HaeRye are the essence of oriental philosophy appearing in Confucian scriptures, including Yin Yang Five Elements Theory, Samjae theory, and the Book of Change. (Kwak, 2016) Neo-Confucianism was the leading and exclusive teaching and governing ideology from the beginning of the Joseon Dynasty.

In 1419 (the first year of King Sejong's reign), a book SeongLiDaeJeon(性理大全) was brought to Joseon. It was compiled and published in China in 1415 and was introduced to the Joseon academic community in four years. It is Neo-Confucianism that Juja(朱子) developed existing Confucianism into a philosophical idea by combining Buddhist philosophical methodology and theory with traditional Confucianism created by Confucius. Neo-Confucianism, in which views and ideas on humans, things, and the world were theoretically systematized, was the latest study at the time. SeongLiDaeJeon contained all the information about Neo-Confucianism and tried to capture the maximum utility that Neo-Confucianism could use. Therefore, this book, along with Jujadaejeon(朱子大全), was recognized as the most prestigious literature, and required reading by Confucian scholars of the Joseon Dynasty. (Kim, 2018) In fact, there are many reasons why these Eastern philosophical contents are incorporated into the creation of letters. The first is the independent purpose of creating a new and original language through all the philosophical books of the time, the second is the inconsistency of the existing language system, the phonetic/verbal purpose to solve the incongruity, and the third is the practical purpose of obtaining the consent and acceptance of the existing aristocracy, minimizing their resistance and controlling conflicts. If the newly created letter was not explained by the Chinese "cultural" system, Sunghyun(聖賢)'s teaching system, and the main concept and structure of the leading Neo-Confucian worldview or value system at the time, no matter how good and useful it was, it would have been difficult to obtain consent and acceptance from Chinese or Joseon intellectuals, and in that case, the letter itself would not have been used at all. (Kim, 2018) In other words, it would have been difficult to justify it by highlighting its practicality, the ruler's heart for the people, and the expression of his love for the people. (Kwak, 2016) Both King Sejong's Preface and Jeong In-Ji's Preface must have focused on this, actually giving the impression. The best Neo-Confucian scholars of the time had to be summoned to explain how the new characters were in line with the worldview in the SeongLiDaeJeon, and the responsibility of the chief was up to Jeong In-ji (Kim, 2016), the Minister of Culture and Education at that time. He seems to have carried out this responsibility excellently. (Kwak, 2016) In summary, again, King Sejong produced characters himself because he felt sorry for the people of the lower class in the traditional class society where the caste system existed, and in implementing and progressing them, he integrated them and created them into a more advanced language, which led to resistance from many aristocrats and political pressures. The enactment and proclamation of the new language would have never been easy in light of the political and cultural relations between China and Korea. Opposition arguments by aristocrats (senior scholars) such as Choi Man-ri reflect the formidable atmosphere of resistance at

the time. Given the context of the times throughout a world history, King Sejong's behavior is too much of a logical leap to understand and move on with mere intellectual curiosity, which is the question leading to this study. While trying to understand and resolve these logical leaps, the essence of Eastern philosophy and the spirit of humanity of King Sejong were found in the collection of HunMinJeongEum and the principle of creating consonants. We found that all King Sejong's policies, events, and values he pursued at that time were linked and organized into specific relationships. This study analyzed the democracy (humanity, democratic humanism, or the source of national democracy of Korea now) that appears throughout the background of the creation, the philosophy contained in the law of vowels and consonants (total set of Oriental philosophy at the time, the logic of the world beyond the limit of language), and the phonetic/verbal science contained in the vowels and consonants. However, this paper did not cover the discovery of vowels but focused on the hidden messages contained in consonants.

#### 4. The General Law contained in the creation principle of HunMinJeongEum

The science of HunMinJeongEum is that it made letters based on phonetic observation and systematic discipleship. The philosophy of HunMinJeongEum appears in the principle of Neo-Confucianism, the theory of SamJae(三才論), Five Elements(五行論), Yin and Yang(陰陽論), and SangSu(象數論), which worked on the disciple principle of HunMinJeongEum.(Paek, 2016; Chu, 2020) Samjae theory is an idea that aims for a harmonious relationship between heaven and earth (天地 = nature) and people, which is "Sky(天)-Earth(地)-Human(人)." It is a theory that sees the basic elements of the world as three elements and understands all things in nature by their interaction. The Sky(天) produces all things, the Earth grows all things, and the Human completes the action of heaven and earth. (Hwang, 2017) The theory of Yin Yang is also the idea that the combination and harmony of the five fundamental elements such as Mok(木; Thursday; wood), Hwa(火; Tuesday; fire), To(土; Saturday; earth), Geum(金; Friday; metal), and Su(水; Wednesday; water) that make up all things in nature, which is universe.(Kwon, 2019; Song, 2018; Kwak, 2016) The theory of Yin and Yang is that all phenomena in the universe or humans appear as pairs of Yin(陰) and Yang(陽), and the operation of the universe is determined by the expansion and extinction of the Yin and Yang. The basic ideology of the Five Elements is that Yin and Yang are expanded and extinguished depending on the four energies of the SaengNo ByeongSa(生老病死). (Lee & Lee & Lee & Kim, 2015)



Source: Troth Adan. *Five Elements* (Right)

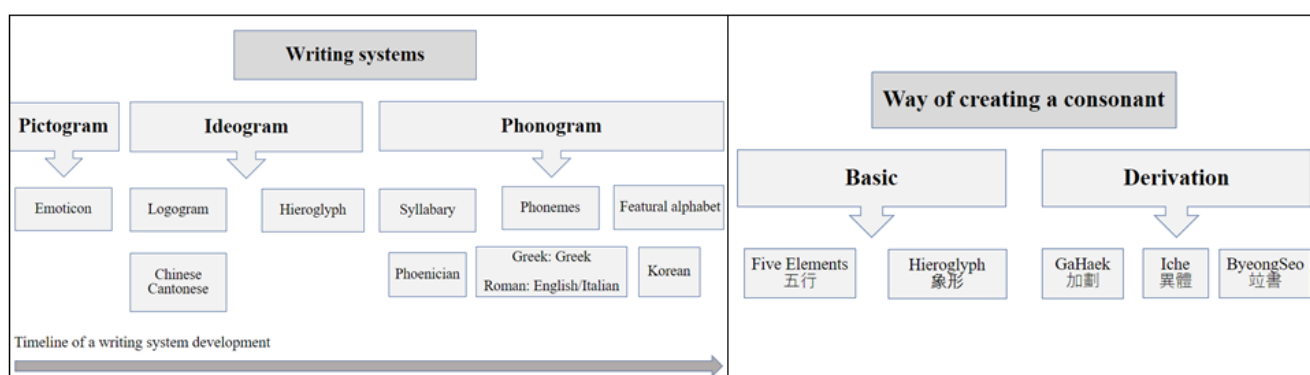
**Figure 2:** Taegeuk (Yin-Yang) and Five Elements (Mok-Hwa-To-Geum-Su) Diagram

SangSu theory generally refers to oriental studies as SangSuHak(象數學). Sang(象) refers to the essence of an object before it appears as a phenomenon. In Han Dong-Seok's *The Principle of Space Change*, the concept of imagination is the opposite of a form(形), and the intangible state that is difficult to recognize for humans who have lost brightness is called Sang(象). The essence of life or the basis of things appears as an image, and identifying and explaining the image is mathematics(數), that is, the theory and philosophy solved in numbers are SangSu theory(象數論) or SangSu philosophy.

Philosophical principles used to make letters are described in HunMinJeongEum HaeRye. This is the basis that HunMinJeongEum embodies philosophy. (Paek, 2014) The term Taeguk(太極) appears first in the Book of Change(周易)'s GyeSaJeon(繫辭傳)', which refers to the origin of the creation of all things in the universe. If you look at Taeguk as a whole, the Five Elements of Yin and Yang can be regarded as an action in Taeguk. (Hwang, 2017) In general, universal value is a value that transcends time and space and can be accommodated by all mankind across a specific race and society. (Paek, 2016) It is very unusual for a single text system to have this universal value, and HunMinJeongEum is the case here. In the JeJa Commentary of HunMinJeongEum, it is said that the human voice was also caused by this change in Yin and Yang. In Neo-Confucian philosophy, all beings in the world cannot escape the cycle of Yin and Yang, and humans are no exception. (Hwang, 2017) If you look at the JeJa principles of HunMinJeongEum HaeRye, it is said that the sound of human words is based on the Five Elements and Yin Yang. It is the moment Philosophy and phonetics(science) meet each other. This convergence application study is commonly applied to all laws of consonants and vowels of HunMinJeongEum.

#### 4.1. HunMinJeongEum- the law of making up consonants.

There are a lot of characters in the world. In terms of linguistic function, it is divided into Ideogram(表意文字) and Phonogram(表音文字). Chinese characters are often referred to as Ideogram, and each letter indicates its meaning, while HunMinJeongEum refers to letters that represent sound by Phonogram. Phonetic letters are again divided into Syllabary(音節文字) and Alphabet(音素文字). Syllabary is typically Hiragana and Katakana in Japanese, and Alphabet is HunMinJeongEum(Korean), English alphabet, Arabic, etc. However, HunMinJeongEum went further and was called Featural alphabet(資質文字). The reason is that each letter has its own unique characteristic, 'feature'. This leads to the systematic and scientific nature of HunMinJeongEum. Consonants in HunMinJeongEum are the letters that reflect human oral structure most naturally.(Yoon, 2011) King Sejong constantly tested which part of the neck vibrated when making a sound of each of the 28 letters of HunMinJeongEum, and made the letters according to the form of vibrations. (Kwon, 1992), and that way, the vocal part of the consonant was symbolized and actually used as a consonant symbol. (Han, 1998) This cannot be found in any language, and the basic tone of consonants is accurately modeled after the oral structure of each mouth and is the same as the Gung-Sang-Gak-Chi-Wu(宮商角徵羽) the five notes of music. It is a text that fits and most accurately symbolizes the appearance of humans when they make sounds from their mouths. No language in the world embodies oral structure when made. (Yoon, 2011) As mentioned earlier, King Sejong seems to have incorporated the Neo-Confucian philosophy of Yin Yang Five Elements into this phonetic (languageal) science to persuade aristocrats and intellectuals. In particular, the Five Elements is a philosophy that forms the basis of the basic consonant of HunMinJeongEum, which is made according to the principle of shape. (Lee & Lee & Lee & Kim, 2015) In addition to the principles of shape according to the Five Elements, it explains the principle of creation of the derivative of HunMinJeongEum consonants according to the principles of GaHaek, Iche, and ByeongSeo. To summarize this, it is as follows.



**Figure 3:** Geoffrey Sampson, Professor of Natural Language Computing in the Department of Informatics, University of Sussex, writing systems (Left) and creation principle of consonants (Right)

According to the disciple principle of HunMinJeongEum, the basic consonant is divided into 'Ah(牙)-Seol(舌)-Soon(脣)-Chi(齒)-Hoo(喉)' and the characteristics are described in combination with the principle of 'Su(Wednesday; water)-



Hwa(Tuesday; fire)-Mok(Thursday; wood)-Geum(Friday; metal)-To(Saturday; earth)'. The principle is as follows. The Hoo is water because it is wet in the mouth, and it is winter because it is an empty and empty flow of water, and the sound corresponds to Wu(羽). The Ah is a tree because it is inconsistent and long with each other, and the tree comes out of the water but has a shape, so it is spring and the sound corresponds to Gak(角). The Seol is sharp and moving, it is a fire, and the fire is blazing and burning, so it is summer and Chi(徵). The Chi is iron when cutting hard and other objects, and it is autumn when iron crumbs are trained and Sang(商). The Soon is the land as it becomes Mona and closed, and the land is wide and large as it implies everything, so it becomes Gung(宮) and late summer. This is how they combines the five elements<sup>1</sup> and the five notes. JeJa principle also explained that the consonants made by the basic text of ChoSeong(initial sounds) and Iche of the derived text were modeled after the shape or function of the pronunciation organ, while the rest were made based on the principle of GaHaek by adding strokes according to the degree to which the sound was a little stronger. (Chu, 2020) The basic letter 'ㄱ, ㄴ, ㄷ, ㄹ, ㅁ', which constitutes Korean, represents the sound from 'molar teeth, tongue, lips, front teeth, and throat', respectively. The shape of each basic letter represents the structure of the tongue or mouth when pronouncing the letter. It was modeled after the basic consonant pronunciation organ, and new letters are created by adding strokes to it (Kim, 2016). For example of 'ㄱ' and 'ㅋ', 'ㅋ' was created by adding a stroke to 'ㄱ'. This is called GaHaek because it added a stroke. Therefore, the pronunciations of 'ㄱ' and 'ㅋ' are similar. The first GaHaek of the HunMinJeongEum consonant element 'ㄱ, ㄴ, ㄷ, ㄹ, ㅁ' is 'ㅋ, ㆁ, ㆅ, ㆆ, ㆇ', and the second GaHaek of it is 'ㆈ, ㆉ, ㆊ, ㆋ'.



Source: HunMinJeongEum Learning, Ministry of Culture, Sports and Tourism.

Figure 4: Five Notes, Five Elements (Left), GaHaek, Iche (Right)

It is easy to see that similar sounds are written in similar letters. In the end, HunMinJeongEum was organized according to systematic speech classification. Previously, the phonetic characteristics of each pronunciation organ were arranged in connection with the Five Elements of Eastern philosophy. The ‘Ah, Seol, Soon, Chi, and Hoo’ were arranged in the order of ‘Mok, Hwa, To, Geum, and Su’, the order of coexistence in the Five Elements. (Lee, 2018) However, this is exactly in line with the order of seasonal changes, and all of these are summarized in the table as follows.

Table 3: Summary of Five elements, notes, seasonal changes, basic consonants, GaHaek

Five Notes	Ah 牙	Seol 舌	Soon 脣	Chi 齒	Hoo 喉
Initial Sound	ㄱ, ㅋ, ㆁ	ㄴ, ㄷ, ㄹ	ㅁ, ㆁ, ㆅ	ㅈ, ㆅ, ㆆ	ㅇ, ㆇ, ㆈ
Organ	Molar teeth	Tongue	Lips	Tooth	Throat
Five Elements	Mok 木 (Thursday; Wood)	Hwa 火 (Tuesday; Fire)	To 土 (Saturday; Earth)	Geum 金 (Friday; Metal)	Su 水 (Wednesday; Water)
Season	Spring	Summer	Late Summer	Fall	Winter
Five Notes	Gak 角	Chi 徵	Gung 宮	Sang 商	Wu 羽

HunMinJeongEum connected human pronunciation organs with Five Elements and related to seasons, sounds, and cardinal directions, and also connected Hado's Seasonal Cycle theory, which is the core principle of the Book of Changes(周易). JeJa principle also shows a connection between the letters corresponding to Five Elements's "tree" with the principle of creation and development of Yin Yang, for example, 'ㅇ' becomes the sprout of a tree, 'ㄱ' means that 'the tree forms the frame', 'ㅋ' means 'the growth of trees', and 'ㄱ' is 'tree's getting old'. This explains that trees sprout, grow, form core(frame), grow, and get old. Because of these points, in the process of creating HunMinJeongEum, King Sejong is evaluated to have demonstrated all the originality that embodies the oriental philosophy(Science of Changes, Neo-Confucianism), phonological principles, and the sound echo of the natural state. So far, we have looked at phonological science and Oriental philosophy(Yin Yang Five Elements, SamJae theory) based on the democratic humanity in the creation of HunMinJeongEum. Finally, Now, it is time to look at the hidden message in the process of creating consonants, the core discoveries of this study, which address the aforementioned question of the logical leap: *a monarch's intellectual curiosity or what?*

#### 4.2. Trace King Sejong's Hidden Code in consonants

According to the preface of "Chil Eum-Yak(七音略) by Jung Cho, "The sound of a crane, the sound of the wind, the sound of a chicken, the barking of a dog, the thunder and lightning, and even if mosquitoes pass by, they can all be transcribed." (Lee, 2015) However, behind this originality, it should be first examined that King Sejong, as a benevolent monarch, had considerable humanities and geographic knowledge. This is the first clue. Understanding how to accept and compromise geographical differences in language can be said to have a great significance in understanding the process of creating HunMinJeongEum. (Lee, 2014) For the publication of King Sejong Geography(世宗實錄地理志), there was an article in 1425 saying, "let the literature necessary for the compilation of geography be uploaded from ChungJu SaGo(忠州史庫)," and in 1432 saying, "Maeng Sa-seong(孟思誠), Gwon Jin(權軫), Yun Hoe(尹淮) post a new national geography. In seven years, the national geography paper, the basis for governing the country, was completed. (Lee, 2014) King Sejong's interest in geography was not just for the public policy, but naturally led to interest in letters and languages from neighboring countries. The SaDae(事大) towards China is also important, but it was the result of recognizing that Joseon's natural characteristics(each region's climate) is different from that of China, so characters that can indicate its own sound are urgently needed. (Lee, 2014) The followings are articles from Lee's(2015) study that can confirm that King Sejong's humanities and geographic perception recorded in the time has expanded to cultural autonomy:

- (1) 上以本國音韻與華語雖殊。其牙舌唇齒喉清濁高下。未嘗不與中國同。列國皆有國音之文。以記國語。獨我國無之。御製諺文字母二十八字。)<보한제집><신숙주 행장>) Since the king's phoneme is different from Japanese, Ah, Seol, Soon, Chi, Hoo, Cheong, Tak, Go, and Ha must be equipped like Chinese characters, and many countries have letters to represent their own language notes, so they record their own language. However, he made 28 consonants and vowels of HunMinJeongEum, saying that only Korea does not have letters. (Bohanjejib <Shin Suk Joo Haengjang> (p. 12).
- (2) 世宗以本國音韻與華語雖殊。基五音清濁高下未嘗不與中國同。而列國皆有國字。以記國語。獨我國無之。御製諺文二十八字)" (신숙주 <묘지명>) King Sejong's phonemes are different from Japanese, but the five notes, Cheong Tak(清濁), Go Ha(高下) are different from those of China, but many countries all write their language because there are letters from their country, but only Korea doesn't have them, so the king made 28 letters. (The graveyard name. <Shin Suk Joo Haengjang> (p. 12).
- (3) 世宗以諸國各製字。獨我國無之。御製字母二十八字 (신숙주 <비명>) Many countries have their own characters, but only Korea does not have them, so King Sejong created a new 28 characters (Scream <Shin Suk Joo Haengjang> (p. 12).
- (4) 吾東方禮樂文章。侷擬華夏。但方言俚語。不與之同。學書者患其旨趣<sup>°</sup>之難曉 Korea's etiquette and culture are comparable to those of China, but the dialect and slang are not the same, so it was difficult for the writer to realize the meaning of the writing. (p. 14).

- (5) 自古九州之內 風土殊異 未有因方言而別爲文字者 唯蒙古西夏 女眞日本西蕃之類 各有其字 是皆夷狄事耳 無足道者 Even if the climate or geography is different in China, which is divided into nine states, there is no other letter in the dialect yet, and only groups such as Mongolia, Western Xia, Japan, and Seobun each have their own letters, but they are all barbarians so their works do not make sense. (Jiphyeonjeon Bachelor Choi Manri, appeal of opposition) (pp. 15-16).
- (6) 上以爲諸國各製文字。以記基國之方言。獨我國無之。遂製字母二十八字。各曰諺文 In the "Jeungbo Literature Remarks", the king enacts letters to record the actual pronunciation in dialect. of his country in various countries, but there are no letters only in Korea, so 28 letters of Jamo were enacted, which is called Eonmun. (p.15).

The summary of these articles reveals King Sejong's perception that Joseon's cultural autonomy is comparable to that of other countries, requiring its own characters as an autonomous country. This is the result of King Sejong's national strategy to resolve the difficulties of communication among the entire population through the enactment of new characters while aiming for a tradition of establishing a new lettering in neighboring countries along with changes in language policies in emerging Ming dynasty. (Lee, 2014) King Sejong's interest in geography to solve diplomatic problems was recorded as the most among all kings of all time.



Figure 3: Annals of the Joseon Dynasty

Throughout all kings, there is a record of the geography of King Sejong as many as 416 times. This means that more than half of the total historical records were recorded by just one monarch. Numbers sometimes convey us a very concise truth. The evidence that King Sejong was interested in geography in such an overwhelming number clearly suggests that there must have been a major or desperate reason at the time and it must have been related to the creation of Korean. As a result, it can be seen that the difference in anthropogeographic sound was considered in the process of creating King Sejong's own characters.

In the process, King Sejong knew that the hardships that the ordinary people had in each region were different, and the sense of compassion for them would have deepened: the realization of different regional weather, regional dialect, regional characteristics of the whole country. This shows the effort and love of King Sejong toward the people. While maintaining this gaze, we looked at the consonants in HunMinJeongEum EoJe, and found the only difference from other Chinese Rime dictionary(韻書) that classifies Chinese characters based on sound regarding the scale of the five notes. According to Lee Young-wol (2006), who studied what Chinese sound dictionaries are related to HunMinJeongEum and their relationship, in 1445 King Sejong sent the Hall of Worthies linguist Shin Sook-ju and others to Liaodong(遼洞) to ask questions about chinese sound, and a year later, on September 29, HunMinJeongEum HaeRye was finally created. The five notes order of HunMinJeongEum is the order of 'Ah, Seol, Soon, Chi, Hoo'. The reason why the arrangement of five notes differs from other Chinese sound dictionaries is the result of King Sejong's decision on five notes(Ah Seol Soon Chi Hoo) and 'Gung, Sang, Gak, Chi, Wu(宮商角徵羽)' based on GoGeumWoonHoiGeoYo(古今韻會舉要) reflecting the northern sound(北方音) of the Yuan Dynasty at the time of HunMinJeongEum creation because King Sejong thought it was more suitable to ours under the period of founding the new dynasty. According to the Annals of the Joseon Dynasty, it must have been a very familiar sound dictionaries for King Sejong because it can be seen that the royal palace used

GoGeumWoonHoiGeoYo a lot from King Taejong, the third ruler of the Joseon Dynasty and the father of King Sejong, to King Sejong. (Lee, 2013) The table below is the consonants and Chinese characters in HunMinJeongEum HaeRye.

**Table 4:** The five notes on different Chinese Rime dictionary and HunMinJeongEum

Five Notes	Ah 牙	Seol 舌	Soon 脣	Chi 齒	Hoo 喉
HongMuJeongUn 洪武正韻 (1375)	Gak 角	Chi 徵	Wu 羽	Sang 商	Gung 宮
HunMinJeongEum 訓民正音 (1443)	Gak 角	Chi 徵	<u>Gung 宮</u>	Sang 商	<u>Wu 羽</u>
DongGukJeongWoon 東國正韻 (1447)	Gak 角	Chi 徵	Wu 羽	Sang 商	Gung 宮
HongMuJeongUnYeak 洪武正韻譯訓 (1455)	Gak 角	Chi 徵	Wu 羽	Sang 商	Gung 宮

Since the number of Chinese consonants listed in HongMuJeongUn, 1375 CE, in the Ming Dynasty of China was 31, Korea's speech sound was different from that of China. The cultural autonomy and democracy contained in Hunminjeongeum are more evident when looking at the public policies he directly participated, researched and implemented, including Goje(ancient system), legal reform, national geography, Yulrye maintenance, and astronomical research for the management of the land system, as well as elaborately researching phonetics, oriental philosophy and astronomy. This actually shows that the foundation of Joseon's autonomy centered on people's livelihoods has become firm. (Lee, 2014) After constantly studying for the people, King Sejong developed what is most suitable for us by understanding the regional weather, dialect and characteristics through the nation's geography for seven years.



Source: Encyclopedia of Korean Culture, 1995

**Figure 4:** GoGeumWoonHoiGeoYo(古今韻會舉要) (left)/ DongGukJeongWoon(東國正韻) (right)





were, but the Chinese characters that displayed the sound did not follow it, but instead used difficult Chinese characters such as 君(君), 蚋(蚋), 快(快), 業(業). Combining these Chinese characters, it was interpreted as "the king and the prince like to make HunMinJeongEum." Park Dae-jong (2018) seems to refer to King Sejong's son Moon-jong and there is a position to identify 君蚋快樂(君蚋快樂) as a task that the king and the Dragon king are happy with, and to interpret the initial sound characters as the spirit of wealth. This difference is something that scholars who were studying in different approaches felt in common that there must have been "something" that was not clearly solved in this part. Previous studies have several problems: first, the interpretation of each other is still different, and second, some interpretations have poor connection with HunMinJeongEum, and third, it is regrettable that there was an overinterpretation without solid basis. For example, Choi Young-hwan, Yeon Jae-hoon, and Lim Hong-bin did not try to study and interpret the rest in depth after 君蚋快樂(君蚋快樂), and it was interpreted as King Sejong did not create Korean alone, but with the prince Moonjong. Therefore, it was not interpreted as "King Sejong, who considered the creation of HunMinJeongEum a national achievement, emphasizing to his son Moonjong that the distribution of Korean is a continuous task," indicating that it did not take into account, the last clue, the confucian perspective on natural disasters(災異觀). In the process of creating HunMinJeongEum, the climate crisis led to the recognition that heaven does not recognize new dynasties and kings according to confucian perspective on natural disasters, and contextual consideration should be given to the efforts of the new dynasty. Therefore, it should be interpreted that it emphasizes the importance of solidifying the new dynasty state to his son Moonjong from the perspective of King Sejong who established the foundation for the new dynasty with cultural autonomy. Now we have found three clues so far: i) geography(regional weather, dialects, and characteristics), ii) difference between Korean and Chinese Rime dictionary(cultural autonomy and democracy implemented by public policies), iii) climate crisis(confucian perspective on natural disasters.)

Park Dae-jong expanded his interpretation from the young prince to the dragon king, and a kind of poem composed of the initial sound characters emphasizes that he was the first to identify the spirit of wealth. It is regrettable that this interpretation does not show the last clue, confucian perspective on natural disasters, and that astronomical interpretation should be reflected more. According to the perspective on natural disasters, the meaning of this initial sound characters group should not be limited to the spirit of wealth, but to the expression of desperation and compassion for King Sejong to try all public policies, reflecting the political cause of the new dynasty based on the theories of the correspondence between human and universe(天人相應) and co-prosperity between human and universe(天人相生). Astronomical interpretations will be discussed in more detail below. The reasons for the problems of previous studies are as follows. First, the humanism(people's livelihood policy) according to Confucian perspective on natural disasters and the independence (autonomous achievements) of science and technology, including astronomical research, were not interpreted in consideration of the overall context from the year of King Sejong's accession to HunMinJeongEum. Second, at the time of the creation of HunMinJeongEum, there were similar literary structures such as songs and poems, but the existing research did not consider the form of Chinese poetry, Gushi(古體詩). Third, different interpretations between scholars were not systematically established, and remained as an 'open ending' for a long time.

**Table 7:** Problems and reasons for chinese character interpretation of HunMinJeongEum consonants

<b>Problem</b>	1. There is a difference in interpretation between scholars. (Generals, theories not established) 1. Some interpretations lack connectivity with HunMinJeongEum. 1. Excessive interpretation based on invalid grounds is seen.
<b>Reason for problem</b>	1. No contextual interpretation of the three clues, a) geography(regional weather, dialects, and characteristics), b) difference between Korean and Chinese Rime dictionary(cultural autonomy and democracy implemented by public policies), c) climate crisis(confucian perspective on natural disasters), are reflected from King Sejong's enthronement to HunMinJeongEum's distribution. 2. No in-depth study of songs and poetry styles with similar structures at the time (Gushi古體詩) 3. Different opinions between previous studies and scholars have been at odds for a long time because the arguments were made by a prestigious and famous professors. (King Sejong's theory of independence, royal family theory, collection transfer theory, controversy over independence, expanded interpretation based on invalid grounds, etc.)

Understanding the past is vast and difficult as if understanding other countries' languages or cultures. Past records of the

distribution of HunMinJeongEum were written for social and democratic purposes against the backdrop of the everyday living conditions of people of that era. In order to understand past records, it is also necessary to understand the living conditions of people who lived in the past, for example, the purpose of weather-climate recording. As in most pre-modern societies, in the Joseon Dynasty, weather and climate had a much greater impact on the economy than they do now. (Lee, 2014) The impact was not just economic. On the contrary, it should be seen as having greater political significance. China and Korea formed a unified nation faster than any other pre-modern society and developed a systematic national organization. (Lee, 2016) This means that the notion of political cause and justification for the exercise of power developed early on. Weather and climate have been extremely important factors in that respect. That is what developed in the form of the perspective on natural disasters. Natural disasters were interpreted as anger from heaven, resentment from the people reaching the sky, or the sky's refusal to recognize the king. As has been emphasized many times before, King Sejong was the third king and grandson of King Taejo Yi Seong-gye(太祖 高皇帝), who overthrew the existing Goryeo Dynasty(高麗) and established the new Joseon Dynasty through a dynastic revolution. Since ancient times, rain and weather from the sky have been considered very important in agricultural countries like Joseon, and these superstitious customs led to hold a ritual for rain and heaven rites, which were organized by the king to lower the rain needed for farming. I found that these wishes and origins were contained in the form of Gushi(古體詩) in the Chinese characters explaining the consonants of the creation of HunMinJeongEum. Therefore, starting with the previous literature result 君君快業(君君快業), the rest of the work is reinterpreted comprehensively reflecting the three clues, especially the last one confucian perspective on natural disasters.

In 君君快業(ㄱㄱㅋㅇ : 군궤궤업: Gun Kyu Qua Up), 군(君) means king, and 궤(虬) means the little king, the prince. Proper rain is an essential element of abundance in Joseon, an agricultural country. Since the king is represented as a dragon in the Orient, the meaning of the 군궤(君虬) is the king and the prince, or the royal family. 궤(快) means joy, and 업(業) means task. In short, it becomes a task that the king and crown prince, the royal family are happy about. (Isn't humanistic work for the people really something that will please the royal family?)



Source: Encyclopedia of Korean Culture, 1995(Left), BD Mariners, 2017(Right)

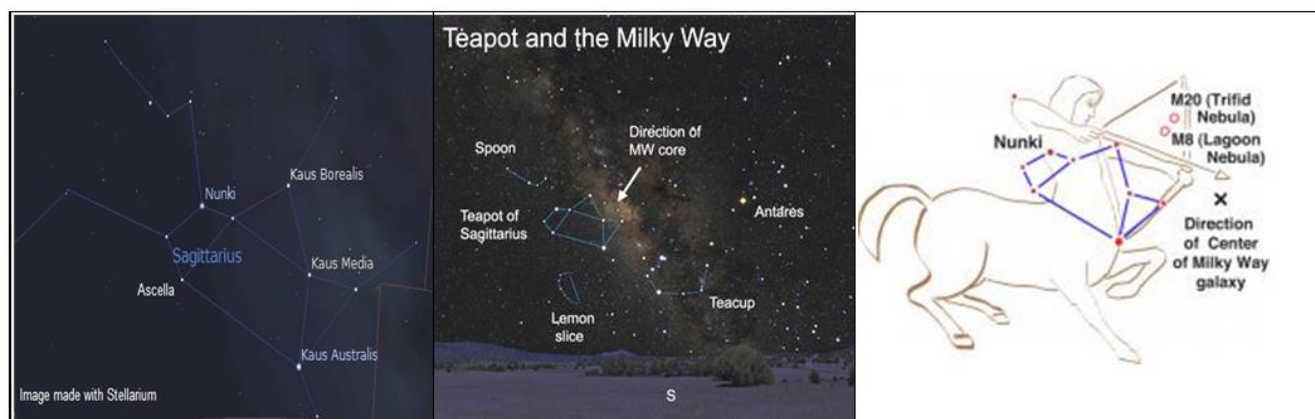
**Figure 8:** CheonMunRyuCho(天文類抄), Nunki, Dipper, the Teapot

In 斗覃吞那(ㄷㄷㅌㄴ : 두담탄나: Du Ddam Tan Na), 두(斗) means a ladle-shaped tool for measuring the amount of grain. In the astronomical book <CheonMunRyuCho(天文類抄)> published during the reign of King Sejong, it was said that when the star Du(斗) was bright, the king and his people became one and the world was peaceful (Daesunjinrihoe, 2010), and the star Du(斗) referred to here is the Nunki(斗宿) of the Six Stars of the Southern Dipper (aka the Milk Dipper or the Little Dipper in contrast to the Big Dipper north.) In Western constellation, it is a part that corresponds to the bow of Sagittarius and is located right next to the center of the Milky Way. In Korea, the Nunki begins to be seen in the southern sky in May and is located in the middle of the southern sky in June and disappears southwest in August. Perhaps because of this, China did not regard the Milk Dipper as important and treated it as the same level as other constellations. But Joseon was different. The characteristic aspect of the weather climate on the Korean Peninsula is that the four seasons are distinct. Most of the year's precipitation needed for farming in a short period of time during the summer rainy season is concentrated, and there is not much rain in the rest of the season. In particular, the long-term dry season(乾期) continues during the period



from winter to spring. Agriculture in Joseon has also developed by adapting to these conditions. The end of the dry season from winter to spring is approximately March and April. This is the time when wheat and barley began to plant grains and sow rice. In other words, it was a time when a certain level of water was needed. If it didn't rain at this time, it would literally ruin the year's farming. King Sejong believed that if there is no rain or less rain in summer solstice, it leads from drought to bad harvests, and from bad harvests to infectious disease. In the Annals of the Joseon Dynasty, frequent rain rituals appear as a remedy. The ancestors believed that there would be a good harvest when nunki was bright and a bad harvest when it was dark. It means that the Milk Dipper is actually a constellation related to water farming. At that time, there is a proverb that means that rice paddies are important in rice farming, as "water in rice paddies is longevity." In addition, as the saying goes, "It rains every cloud field after the summer solstice," it rains a lot during the summer solstice, so water to be used as rice paddies has been naturally made since ancient times. 땀(覃) means deep and wide, 탄(呑) means surrounding something, and 나(那) means 'how' (or 'by what means') In summary, it can be interpreted as, "How can I not pay attention to the Milk Dipper when it affects?" it seems like as if King Sejong is telling the people that "Avoiding bad harvests due to rain is what I want the most" in the desperate weather situation (drought to bad harvests to infectious disease) when Joseon, an agricultural country, met in 1443.

In 驚步漂彌(日田立口: 별뿔표미), 별(驚) means that the bow is twisted, 步(步) means an action, 漂(漂) means a state of wandering, and 彌(彌) means widespread and even more. In summary, it is interpreted as "When the bow is twisted, it is widely wandering." The bow represents the Sagittarius. What previous studies are missing here is the kettle-shaped mouth, the winnow star. a winnow is a large dustpan-shaped tool used to peel grains such as rice and barley in the old countryside. The reason why these stars are called the winnow stars is that the Milky Way looks like a cluster of grains. If the ladle is distorted here, the grain will not be properly contained in the winnow star. Even if you look at the bow as the whole Sagittarius, it means that farming is reversed. Therefore, the distortion of the bow means drought, which means that the grain cannot be harvested, leads to a famine, and the lives of the people drift.



Source: SkyCaramba, 2014(Left), Borrego Sun, 2021(Center), StarDate(Right)

**Figure 9:** Nunki, Sagittarius, the Teapot, Milky way

In 即慈侵戍邪(不双夫入从: 즉짜침술싸: Zeuk Jja Chim Sul Sa), 즉(即) now represents 'soon', 'if', 짜(慈) represents love, mother, mercy, 침(侵) refers to a bad harvest, and 술(戍) represents a harvest in September of the lunar calendar, and 싸(邪) refers to the ill-natured or evilness. Ancient people thought the center of our galaxy was a uterus. Since the part corresponding to the uterus of the universe and the sun and the earth are in a relative straight line, the myth and energy of such birth are linked. In fact, for this reason, the Milk Dipper explains the birth and the Big Dipper north or the Plough explains the death. In summary, "that is, if the mother's love goes wrong, the warmth of the land is not right." Mother's love is the most brilliant Nunki of the Milk Dipper's main body, the third of its kind in a ladle bowl. The Nunki means the star that marks the beginning of the sea. The Milk Dipper is also called milk dipper because there is a milky way right next to it. Earlier, the Milky Way was called grain, so "the ladle next to grain" is a star that has a more special meaning in Joseon, an agricultural country. And 술戍 is the 11th of the twelve signs of the zodiac, which refers to the time when a year's farming is completed, harvested, stored and threshing in a warehouse. To sum it up, it is interpreted that "if you go against your mother (the land) (if the country suffers a famine), threshing crops (recruitment) is not right." This is a desperate desire or sigh for the people of King Sejong at the time when the ritual for rain was held almost every day due to severe drought.





King Sejong 18 <sup>th</sup> year(1436)	Biggest drought and crop failure – political crisis Ritual for rain, the 3 <sup>rd</sup> clue: 4.17/4.20/4.21/4.22/4.23/4.25/4.27/5.4/5.5/5.7/5.8/5.11/5.13/5.15 /5.16/5.19/5.20/5.27/5.29/5.30/6.4/6.6/6.15/6.18/6.20/6.29/ /6.4/6.7/6.8/6.9/6.11/6.24/6.25/6.27/6.28/7.1/7.2/7.6/7.11/7.14/7.15/7.16/7.17/7.18/7. .20/7.25
King Sejong 21 <sup>st</sup> year(1439)	Ritual for rain, the 3 <sup>rd</sup> clue: 4.16/4.17/4.20/4.21/4.22/4.24/4.28/6.22/6.23/6.25/6.27 7.2/7.7/7.11/7.13/7.16/7.17/7.19/7.21/7.24/7.25/7.26/7.28
King Sejong 22 <sup>nd</sup> (1440)~32 <sup>nd</sup> (1450): -Research for teaching	After three consecutive years of great famine, Yi Sun-ji was appointed to write CheonMunRyuCho(天文類抄), the 2 <sup>nd</sup> clue Ritual for rain, the 3 <sup>rd</sup> clue: 4.22/4.23/4.25/4.26/4.27/4.29/5.2/5.4/5.5/5.8/5.9/5.12/5.15
King Sejong 24 <sup>th</sup> year(1442): - <u>Research for teaching</u>	Research and Compilation of national geography(八道地理志), the 1 <sup>st</sup> clue
King Sejong 25 <sup>th</sup> year(1443): - <u>Teaching through education</u>	Creation of HunMinJeongEum, Ritual for rain, the 3 <sup>rd</sup> clue: 4.21/4.25/4.27/4.28/5.1/5.2/5.4/5.6/5.7/5.9/5.10/5.11/5.13/5.15 /5.16/ 6.24/6.27/6.29/7.2/7.3/7.5/7.6/7.8/7.9/7.11/7.12/7.14 /7.15/7.16/ 7.18/7.19/7.20
King Sejong 26 <sup>th</sup> year(1444):	Ritual for rain, the 3 <sup>rd</sup> clue: 6.21/6.27/6.29/7.3/7.6/7.8/7.12/7.20/7.21/7.25
King Sejong 27 <sup>th</sup> year(1445): - <u>Research for teaching</u>	Check Unseo(韻書)- Make scholars go ask a rime dictionary Ritual for rain, the 3 <sup>rd</sup> clue: 5.6/5.7/5.9/5.11/5.12/5.16/5.18
King Sejong 28 <sup>th</sup> year(1446): - <u>Teaching through education</u>	Distribution of HunMinJeongEum, Drought -> Bad harvest -> 8 times ritual for rain (Most record in late April) Ritual for rain, the 3 <sup>rd</sup> clue: 4.16/4.18/4.20/4.21/4.24/4.26/4.28/4.30/5.7/5.12/5.23
King Sejong 29 <sup>th</sup> year(1447) - <u>Teaching through education</u>	Complete <DongGukJeongUn>, Publish <YongBiEoCheonGa>
King Sejong 30 <sup>th</sup> year(1448) - <u>Teaching through education</u>	Promulgate DongGukJeongUn Ritual for rain, the 3 <sup>rd</sup> clue: 4.20/4.22/5.1/5.3/5.8/5.11/7.24
King Sejong 31 <sup>st</sup> year(1449) - <u>Teaching through education</u>	Publish SeokBoSangJeol, WeolInCheonGangJiGok Ritual for rain, the 3 <sup>rd</sup> clue: 5.20/5.21/5.28/5.29/6.3/6.5/6.6/6.19/6.20/6.28/7.6

\* Founded 26 droughts in 1410, 24 droughts in 1420, 41 droughts in 1430, 20 droughts in 1440 and 35 droughts in 1450 (Lee, 2016)

In fact, in the year HunMinJeongEum was created, there were 32 rain rituals (April to July), and 12 government policy implementation related to rain. This shows that a severe drought at the time caused a bad harvest, and solving this problem was the most important issue for King Sejong. Now, if all of these are summarized, the interpretation of Chinese characters for explaining HunMinJeongEum consonants are as follows:

**Table 9:** Modern interpretation of HunMinJeongEum consonants

7 Notes and Corresponding Characters			Modern reinterpretation
7 notes	Initial Sound	Corresponding Character	1. 君蚘快業(ㄱ ㄱ ㅋ ㅍ : 군규쾌업: Gun Kyu Qua Up) 2. 斗覃吞那(ㄷ ㅌ ㅌ ㄴ : 두담탄나: Du Ddam Tan Na)
	Haerye Yeah Ui(例義)	Haerye Yeah Ui(例義)	
Ah	ㄱ, ㄱ, ㅋ, ㅍ	君, 蚘, 快, 業	3. 驚步漂彌(ㄷ ㅌ ㅌ ㅍ : 별보표미: Byul Bbo Pyo Me) 4. 卽慈侵戍邪(ㅈ ㅈ ㅈ ㅈ ㅈ : 즉차침술싸: Zeuk Jja Chim Sul Sa)
Seol	ㄷ, ㅌ, ㅌ, ㄴ	斗, 覃, 吞, 那	5. 挹虛洪欲(ㅇ ㅎ ㅎ ㅇ : 읍허홍욕: Eup Heo Hong Yook)
Soon	ㄷ, ㅌ, ㅌ, ㅍ	驚, 步, 漂, 彌	6. 閭穰(ㄹ ㅍ : 러양 : Ryeo Yang)
Chi	ㅈ, ㅈ, ㅈ, ㅈ, ㅈ	卽, 慈, 侵, 戍, 邪	1. A task that the king and crown prince (= the royal family) are happy about. 2. How can I not pay attention to the Milk Dipper when it affects? 3. When the ladle is distorted, the grain cannot be harvested, leads to a famine, and the lives of the people drift.
Hoo	ㅇ, ㅎ, ㅎ, ㅇ	挹, 虛, 洪, 欲	4. If you go against your mother (the land) (if the country suffers a famine), threshing crops (recruitment) is not right.
Ban-Seol	ㄹ	閭	5. I hope that starting to scoop out a large amount of water in the empty space(gap) and pour it nationwide.
Ban-Chi	ㅍ	穰	6. (and) I want to make the whole people have a ample grain of rice

This was the hidden meaning of creating and containing the basics of the Joseon alphabet and Korean consonants created by King Sejong, the fourth king of Joseon 579 years ago. The 23 letters from 君(ㄱ) to 穰(ㅍ) turned out to be comprehensive works including (i) humanism for the people of King Sejong, (ii) realization of regional weather, dialects, and characteristics through geography, (iii) public policies for cultural autonomy and democracy, (iv) importance of climate as agricultural country and political legitimacy based on the confucian perspective on natural disasters, especially the severe drought, catastrophic famine year during the creation process, (v) total acquisition of astronomical knowledge based on CheonMunRyuCho(天文類抄), (vi) Gushi(古體詩), one of the poem method that is not tied to the form and rule. Today, this kind of work can be seen as the essence of interdisciplinary convergence research.

At first, I thought that it was a poem for the propagation of HunMinJeongEum, but it was impossible in reality because the people could not read these Chinese characters at the time. Hence, it seems more accurate to see it as a kind of Easter Egg, or Da Vinci Code left by King Sejong through special Chinese characters expressing independence from a certain period, not initial sound in China's Unseo in the process of creating Korean alphabets. DongGukJeongUn(東國正韻), YongBiEoCheonGa(龍飛御天歌), SeokBoSangJeol(釋譜詳節), WeolInCheonGangJiGok(月印千江之曲), and HongMuJeongYeonYeokHun(洪武正韻譯訓), which have been created one after another since the publication of HunMinJeongEum HaeRye containing poems that think of Sejong's people, are all National Treasure, especially HongMuJeongYeonYeokHun is also 170 years ahead of Matteo Ricci and Nicholas Trigault's Xiruermuzi(西儒耳目資), in 1625), which can be highlighted as important data for studying Chinese phoneme in the 15th century. (Lee, 2006)

The thing is that all of these language and literature projects are epic poems, written in Korean, Buddhist books, and 500 songs. All of which have something in common: safety of people's livelihood and spreading Korean. In the end, through this conventional observation, it can be assumed that HunMinJeongEum was a text for all the foolish and poor people who could not read, the severe drought and the pain of the people that had been the foundation of the country since the year of King

Sejong's reign, and that King Sejong's literary development of HunMinJeongEum at the time was also at a considerable level, and that it contained humanism's message as a leader of the nation when King Sejong created HunMinJeongEum and hoped that the people of the time and the people of this land would live happily even after his death. Today, our descendants are fully enjoying all their effort and achievements on the land of our ancestors who left about 600 years ago. It has been quite a long time, but even now someone like me would like to reinterpret the Korean language and the deep message made by King Sejong and promote it to the international community. Historically, HunMinJeongEum is a letter made more than 2,000 years later than Chinese and Roman characters. As it was a belatedly created character, Sejong, who created HunMinJeongEum, was able to use the principles of literature and information on various characters, including the speech analysis methodology at the time. (Paek, 2016)

Knowledge of Chinese phonology was used as a speech analysis methodology, and numerically, information on East Asian characters such as Chinese characters and Phags-pa script was also available. Since HunMinJeongEum was created relatively late, it secured already accumulated speech analysis methods and text-related information, and in this regard, it was highly likely to become an excellent character. In addition, HunMinJeongEum is not a character made through gradual changes historically, such as English alphabets and Chinese characters, but a character created by a specific creator to realize political and social purposes at a specific time. Thus, even though HunMinJeongEum is a single character, it contains values related to the demands of the times at the time of creation, the purpose of creation, and the principle of creation. (Paek, 2016) No characters in the world have inherent universal values at the ideological level in relation to the purpose of creation and the principle of creation, such as HunMinJeongEum. (Park, 2013) This can be easily seen by comparing the Roman alphabet or Chinese Chinese characters and HunMinJeongEum, which are used by the largest population on Earth today. Roman and Chinese characters are letters that have undergone many changes over a long period of time without knowing who the creator is. Because of this historicity, Chinese and Roman characters are difficult to compare with Hangeul. Furthermore, it cannot be found throughout world history that a monarch in 15th century produces it without the aristocrats knowing it. In the information age, Japanese or Chinese characters are first written or converted into alphabets for computers to process information, and Korean is directly entered as a binary principle. This means that it is more linguistically suitable for the information age. In addition, HunMinJeongEum consonant-vowel law is applied intact to all computer keyboards and smartphone inputs made in Korea today. In particular, in smartphones of Korean companies such as Samsung and LG, which are famous around the world, keyboards are still made with the theory of "天(Sky)-地(Earth)-人(Human)." Other types of keyboard systems are also available, but it is CheonJiIn(Sky-Earth-Man) keyboard type that has been designated as national standard inputs. Moreover, the Eastern philosophical principles of Yin Yang and Five Elements contained in HunMinJeongEum still remain in the form of a "Generation name" when naming Koreans.<sup>1</sup> This is a culture that names Korea, which has been passed down for hundreds of years since Neo-Confucianism entered Joseon. When meeting Koreans, if anyone of all ages asks about the origin and meaning of the name, they will happily inform you of the meaning without hesitation. It is surprising to think again that the Korean alphabets made in the 1400s are being used, utilized, and applied even after about 600 years.

## 8. Closing remarks

HunMinJeongEum is a letter registered as a World Record Heritage of the United Nations Educational Science and Culture Organization (UNESCO) on October 1, 1997. UN designated it as the "World Day for the Eradication of Illiteracy" in commemoration of the birth of King Sejong and established the King Sejong Prize, a global award for the eradication of illiteracy, in 1989, and has been presenting it to people or organizations that have contributed to fighting against illiteracy in the world since 1990. HunMinJeongEum is easy to learn for now. The number of adult illiterates is estimated to be about 880 million, or 20% of the world's adult population, but the illiteracy rate in Korea is less than 1%. Just as HunMinJeongEum Haerye and The Preface of Jeong In-ji said, "The wise will learn it even before they finish the morning, and even the foolish can learn it in 10 days," Koreans who speak their native language who do not remember learning Korean when they were young are so naturally used to expressing the writings and sounds of other languages in Korean. This is because King Sejong made it possible to contain all the sounds that existed in the world when he created HunMinJeongEum. In this study, the following points were found by comprehensively looking at the democracy behind the creation of HunMinJeongEum and the law of consonants in the creation principle. First, King Sejong studied many different subjects, combined the most recent studies of the time, led to a number of original and independent inventions, and achieved autonomous achievements that surpassed the original ones in the process. The greatest achievement of all was the creation of HunMinJeongEum. Second, all the methods of obtaining recognition from the sky in the ancient books began to be



applied to the severe drought and famine that have continued since the reign of King Sejong. The public policy implementation was a punishment reduction policy to reduce the people's resentment by allowing the people to continue their lives, publishing and distributing various books that enlighten them through education, reducing unfair lawsuits, forgiving light sins, and even listening to requests related to slaves. The creation of HunMinJeongEum took place in this context, and it was confirmed that the pain of the people reached its peak due to the great famine of Joseon in the last three years, including the year of the invention of HunMinJeongEum. Third, amid the challenges of the times, secretly creating the Joseon alphabet for the people, which meant the weakening of royal power, and achieving independent achievements, unlike those of China, set a precedent for a great monarch who was responsible for the people under political pressure at home and abroad.

By reinterpreting the Chinese characters for explaining consonants in a comprehensive and contextual manner with the three founded clues, we could understand King Sejong's mind, which was concerned about the famine and sympathized with the pain of the people amid the challenges of the times. As if "my heart is like this," he implied to the people and wrote a poem about his earnest desire for sky(天). King Sejong truly dreamed of his people and descendants living happily. It could not be easily found throughout the world history in 15<sup>th</sup> century, when the status system existed, that a monarch of Joseon, a country in Asia, himself learned Science of Changes (Eastern philosophy), hemophony, and feng shui (anthropogeography), astronomy, and produced his own characters against the powerful noble class of the time in order to reduce the injustice of the people controlled by the aristocracy.

Today, King Sejong's creation of HunMinJeongEum can be summarized as (1) humanism (democracy), (2) philosophy (the collection of Oriental philosophy, the logic of the world beyond the limits of language), and (3) Science and Technology (phonetic, linguistic), especially the fact that the absolute monarchy government looked at sky, earth, and human in accordance with the order of Neo-Confucianism as an indispensable relationship between parents and children, and implemented public policies for the people in awe of the nature of sky. For these leaders, even after 100 to 500 to 1,000 years, the people of the country express and will do eternal respect and gratitude, and even after such a long time, someone is informing the world of their achievements. This is significant in itself in that it is the source of Korean national democracy today. As part of global citizens today, this study aims to help foreigners understand and love the Korean Wave and Korea more, and promote the language and value of Korean in effort for the common good around the world in the climate crisis. The historical figure that Korean love and respect the most today is King Sejong, and the memorial statue in the middle of Gwanghwamun Square, the most beloved tourist attraction in Korea, is also King Sejong. Gwanghwamun gate is the site of the royal palace where Joseon's monarchs, including King Sejong, lived in the past, and this is where the executive office and official residence of the president of South Korea are located. Even now, the principle of naming Koreans is reflected in the creation principle of "HunMinJeongEum," which was created by King Sejong. So far, there have been prior studies dealing with the linguistic science of HunMinJeongEum at home and abroad, but there has been no study in which the philosophy, the background of the times, a monarch's efforts and humanistic spirit, and King Sejong's intention, which was hidden in the principle of creating consonants, have been interpreted all in context. This study has shown that the values of the East and the West seem different like the confucian perspective at first glance, but their inner philosophical thoughts such as humanism, democracy, and ideas that value the natural environment have more similarities, and I hope that this willingness to discover and deliver can be the cornerstone of peace in which the East and the West harmonize, coexist, and live together today.

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