

# Analysis of Seongho Yi Ik's Theory of Cognition

Woo-Hyung KIM

## Abstract

*The theory of cognition of Yi Ik was constructed in response to Kim Chang-hyeop's argument, which separated cognition from morality by distinguishing between psychological energy and physical energy. Yi Ik reinterpreted Yi Hwang's theory of mutual manifestation by making a distinction between psychological and physical energy, but developed a counterargument to Kim Chang-hyeop's separation of cognition from morality. First, taking advantage of the Western medicine introduced by Adam Schall for connecting psychological and physical energy, Yi Ik insisted that the brain, which belonged to physical energy, could control the lower level cognitions like reflex action and sense perception. However, according to him, since mind, which was made of psychological energy, supervised all the processes of cognition by the principle of human nature, psychological energy and physical energy were interrelated. Second, in contrast with Kim Chang-hyeop, he reconnected cognition to wisdom as the source of moral consciousness and the intellectual virtue that could operate cognitive abilities. Although Yi Ik partially accepted the naturalism and psychologism of the Yulgok School, his theory can be considered a response of the Toegye School to Kim Chang-hyeop and a creative theory of cognition and morality integration.*

**Keywords:** Seongho Yi Ik, cognition (*jigak*), wisdom (*ji*), psychological energy (*simgi*), physical energy (*hyeonggi*), Kim Chang-hyeop, theory of mind (*simseol*)

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Woo-Hyung KIM is Lecturer of Philosophy at Yonsei University. E-mail: wittshi@hanmail.net.

## Introduction

This article seeks to highlight the cognitive theory of Seongho 星湖 Yi Ik 李瀼 (1681–1763), with a focus on the concepts of *jigak* 知覺 (cognition) and *ji* 智 (wisdom). Although Yi Ik has long been in the spotlight as a Silhak (Practical Learning) scholar, this study analyzes his theory of cognition from the perspective of its continuum with Seongnihak 性理學 (Neo-Confucianism). His philosophy could generally be regarded as “the development of issues and theories in Zhu Xi’s philosophy” (Lyu 1985, 175). The new trend of thought that developed during the late Joseon dynasty implied a process of specialization in philosophy and science. Accordingly, Yi Ik presented a new theory of cognition reflecting the scientific knowledge of his time. In this regard, it is also possible to say that “Seongho constantly kept on grafting Western theories on the traditional perspective which he did not abandon” (Ahn 2004, 526). Therefore, we need to take a balanced approach in analyzing the impact of Seohak (Western Learning).<sup>1</sup>

Recently, Moon (2009) displayed a balanced perspective, in that the author considered the impact of Seohak from the perspective of its continuum with Neo-Confucianism. However, regarding the relationship between the cognitive theory of Yi Ik and the Yulgok School—a group following Yulgok 栗谷 Yi I 李珣 (1536–1584)—Moon only briefly commented on their similarities instead of their rivalry. By paying attention to the competitive relationship between Yi Ik as a member of Toegye School—a group following Toegye 退溪 Yi Hwang 李滉 (1501–1570)—and the Yulgok School in the field of theory of mind, this article posits the concept of *jigak* as the key to explaining the main features of his theory. Indeed, the concept of *jigak* was not only at the core of the philosophy of mind of Yi Ik, but also embodied the theoretical differences between the Toegye School and Yulgok School. Therefore, prior to investigating the cognitive theory of Yi Ik, the main characteristics related to cognitive theory in the Four-Seven Debate (*sadan*

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1. The term “Seohak 西學” refers inclusively to both Catholicism and Western science and technology. While Yi Ik criticized Catholicism, he regarded Western science and technology with favorable eyes and showed an intention to embrace them positively.

*chiljeongnon* 四端七情論), as well as the ideas of Kim Chang-hyeop 金昌協 (1651–1708)—the leading figure of the Yulgok School in the debate on cognition in those days—need to be considered. The main point of this article is that the cognitive theory of Yi Ik featured a counterargument to Kim Chang-hyeop, who separated *jigak* (cognition) from *ji* (wisdom) and *deok* 德 (morality) by distinguishing between *simgi* 心氣 (psychological energy) and *hyeonggi* 形氣 (physical energy). I will examine this main point by dividing it into the following two: (1) For connecting *simgi* and *hyeonggi*, Yi Ik reconstructed the cognition process by making use of a clue from Western medicine of the period; and (2) for relating *jigak* to *ji*, Yi Ik explicated *ji* as the intellectual virtue that enables us to use the cognitive abilities of mind from the perspective of Zhu Xi and Yi Hwang.

### Cognitive Theory in the Four-Seven Debate

The Four-Seven Debate, the most famous philosophical dispute during the Joseon dynasty—which saw a first round between Yi Hwang and Ki Dae-seung 奇大升 (1527–1572) and a second round between Yi I and Seong Hon 成渾 (1535–1598)—was fundamentally related to the theme of cognition. The debate not only centered on ethical questions, but also carried epistemological implications. This suggests that the Four-Seven Debate is premised on the integrated structure of ethics and epistemology that is a key feature of Neo-Confucianism. In his “Zhongyong zhangju xu 中庸章句序” (Preface to the *Commentary on the Doctrine of the Mean*), Zhu Xi explained the ethical concepts of *insim* 人心 (*renxin* in Chinese; “human mind”) and *dosim* 道心 (*daoxin* in Chinese; “moral mind”) in terms of the concept of *jigak* (*zhijue* in Chinese), which referred to the cognitive function of mind.<sup>2</sup> That is, Zhu Xi held that moral mind—as ethical consciousness—and human mind—as general consciousness—were distinguished by their cognized content, and he finally “completed the integrated structure of ethics

2. “心之虛靈知覺，一而已矣，而以爲有人心道心之異者，則以其或生於形氣之私，或原於性命之正，而所以爲知覺者不同” (*Zhu Xi ji*, vol. 76, 3994).

and epistemology by establishing the theory of human mind and moral mind as moral philosophy on the ground of cognitive theory” (W. Kim 2013, 184).

According to Zhu Xi, *jigak* designates the cognitive function as a whole, through which mind gives rise to real consciousness from internal human nature. By means of cognitive function, mind as an epistemic agent is able to perceive external things, to raise feelings and emotions, and to know moral rules and the laws of nature through reasoning.<sup>3</sup> While *ui* 意 (intention), which occurs immediately after cognitive function, is the practical function of mind, *jigak* represents the intellectual function of mind. Cognitive function can only work through the union of two factors, *i* 理 (*li* in Chinese) and *gi* 氣 (*qi* in Chinese): the former supplies the rational forms, principles, and contents of cognition, while the latter denotes the sensory material or energy issued from things and body. It should be noted that Zhu Xi designates *ji* (*zhi* in Chinese) as the principle or virtue that can control cognitive function as a whole. This suggests that among the two factors of cognition, Zhu Xi attached more importance to *i*. As such, the context of cognitive theory was still maintained in the Four-Seven Debate: as a successor to Zhu Xi's perspective of *juri* 主理 (literally, “centered on principle”), Yi Hwang regarded *ji* as the virtue that could generally supervise the cognitive function. By contrast, Ki Dae-seung and Yi I founded a new school called as *jugi* 主氣 (literally, “centered on energy”) by emphasizing the cognitive abilities of mind.<sup>4</sup>

Yi Hwang divided the Four Beginnings (*sadan* 四端)—commiseration (giving rise to humanity), shame and dislike (the basis of righteousness),

3. In this regard, it should be noted that *jigak* cannot be confined to “sense perception.”

The concept of *jigak* comprehensively referred to the cognitive function, which included such high-level abilities as investigating the principles of things and the reasons for this knowledge. On this, see W. Kim (2005, 36–37).

4. The terms *juri* and *jugi* were first used by Yi Hwang in his debate with Ki Dae-seung. Although these terms reflected Yi Hwang's intention to define Ki Dae-seung's position as *jugi*, they were appropriate to indicate the two opposite positions in the context of Neo-Confucian epistemology. Therefore, we need to reuse the terms on the premise of epistemological redefinition. On the problem of *juri* and *jugi*, see “Yeokjuja haeseol” (Translator's Introduction) in Takahashi (1999, 5–21).

deference and compliance (giving rise to propriety), right and wrong (the basis of wisdom)—and the Seven Feelings (*chiljeong* 七情)—joy, anger, sorrow, fear, love, hatred, and desire—into two essentially different feelings. He also regarded the Four Beginnings as manifestations of moral mind and the Seven Feelings as manifestations of human mind, respectively. He insisted that, since the two feelings were distinct from each other in their contents of cognition, they must have different sources. That is, since the Four Beginnings (moral mind) represented the consciousness that one should follow the moral rules and norms originated from human nature, they should be discriminated from the Seven Feelings (human mind) arising from the sensory material formed by contact with things. In this sense, Yi Hwang ultimately proposed a theory of “mutual manifestation” (*hobal* 互發): “In the Four Beginnings, *i* manifests and *gi* follows, while in the Seven Feelings, *gi* manifests and *i* rides.” This implies that the moral contents of cognition originate from the principle of human nature, whereas the contents related to desire spring from sensory material.

In contrast with Yi Hwang, on the premise that all cognition could be generated only by “the one course, through which *gi* manifests and *i* rides,” Yi I insisted that one could not be conscious of the essential difference between the contents of the Four Beginnings and the Seven Feelings. When Ugye 牛溪 Seong Hon 成渾 (1535–1598) pointed out the conformity between the theory of mutual manifestation of Yi Hwang and the thesis of human mind and moral mind in the “Zhongyong zhangju xu” of Zhu Xi, Yi I advocated his own theory as follows: human mind and moral mind could not be formed until the functions of *ui*, such as “planning, comparing, and calculating,” were added onto the particular feelings. Thus, human mind could be explained by opposition with moral mind, unlike the Seven Feelings which could include the Four Beginnings. Since *i* was not the cause to bring about the moral consciousness of “ought,” it could be no more than the formal principle for the manifestation of *gi*. Therefore, the determination between moral mind and human mind, and between good and evil, depended on whether or not the consequence of cognitive process coincided with external norms (*ye* 禮). This consequentialism was incompatible with Zhu Xi and Yi Hwang, who trusted in *a priori* morality and saw internal motivations

and duty as crucial. These two ethical positions were basically related to their opposite perspectives on cognition.

During the late Joseon dynasty, Song Si-yeol 宋時烈 (1607–1689), a member of the Yulgok School, felt the need to set up Zhu Xi-ist ideology in order to overcome the ideological social disintegration caused by two wars. In that agenda, he paid attention to the theme of cognition as a subject. That is to say, he understood that the unification of the opposing positions of Yi Hwang and Yi I depended on cognitive theory. However, Song Si-yeol only extended the perspective of Yi I consistently, without forming an integrated theory of cognition. Following Song Si-yeol, Kim Chang-hyeop himself took upon the task of absorbing “cognition as the function of *ji*” (*jiji* 智知) of Yi Hwang on the basis of “cognition of mind” (*simji* 心知) of Yi I. Like Yi I and Song Si-yeol, Kim Chang-hyeop regarded cognitive function as formed according to the one course through which “*gi* manifests and *i* rides.” However, he made a new breakthrough in criticizing Yi Hwang by delineating differences between *simgi* (psychological energy) and *hyeonggi* (physical energy) for the first time.<sup>5</sup>

The *i* and *gi* mentioned by Toegye probably referred to the *i* and *gi* retained in mind, whereas Zhu Xi's so-called *seongmyeong* 性命 (*xingming* in Chinese) and *hyeonggi* (*xingqi* in Chinese) respectively indicated human nature and the body given at birth. *Seongmyeong* is not different from *i*. However, *gi* and *hyeonggi* are very different. So-called *hyeonggi* only refers to ears, eyes, mouth, nose, limbs, etc. *Ibal* 理發 (manifestation of *i*) and *gibal* 氣發 (manifestation of *gi*) of Toegye imply that the Four Beginnings originate from the *i* of mind while the Seven Feelings come from the *gi* of mind. However, Zhu Xi's so-called *hoksaeng* 或生 and *hogwon* 或原 meant that the empty and spiritual cognition of mind sometimes manifested for the sake of *hyeonggi*, while at other times, it manifested for the purpose of *seongmyeong*. Since Yulgok was not able to explain that clearly, in the end he could not remove Ugye's doubt.<sup>6</sup>

5. This point was already mentioned by Moon (2009, 28).

6. “蓋退溪所謂理氣，以心中所存之理與氣言之也，朱子所謂性命形氣，以人生所具之性與形言之也，理與性命則無以異矣。若夫氣與形氣則大不同。所謂形氣者，專指耳目口鼻四肢百體之屬也。退溪之所謂理發氣發者，謂四端七情之生，或發於心中之理，或發於心中之氣也，朱子所謂或生或原者，謂心之虛靈知覺，或為形氣而

In mentioning the differences between psychological and physical energy, Kim Chang-hyeop was suggesting that the mutual manifestation theory of Yi Hwang subtly differed from the cognitive theory of Zhu Xi. In relation to cognition, he believed that Yi I was correct and orthodox. However, Kim Chang-hyeop was saying more than that in the above quoted passage: he held that the realm of cognition related to psychological energy should be distinguished from the moral realm connected to physical energy. According to Kim Chang-hyeop, since “the empty and spiritual cognition” of mind implies that psychological energy could operate automatically, the principle of controlling cognitive function does not have to be assumed additionally. Therefore, *ji* could no longer be regarded as “the principle of cognition” (*jigak ji ri* 知覺之理). The concept of “cognition as the function of *ji*” was also denied. Consequently, cognition was separated from all the moral principles, which could be abstracted as humanity (仁), righteousness (義), propriety (禮), and wisdom (智),<sup>7</sup> probably implying a “split between cognition and morality” (W. Kim 2014, 82).

Meanwhile, Kim Chang-hyeop kept his distance from the consequentialism and externalism of Yi I and Song Si-yeol by admitting an innate moral nature, which could be guessed only as a moral criterion by purifying psychological energy and calculating the component ratio of *i* and *gi* in the particular state of mind. As such, the position of Kim Chang-hyeop has been called “a compromise stance between Toegye and Yulgok,” implying an attempt to unify the two perspectives represented by Yi Hwang and Yi I into a cognitive theory. The distinction between psychological energy and physical energy was designed to critique Yi Hwang and supplement the cognitive theory of Yi I. Kim Chang-hyeop regarded cognition mainly as the lower-level functions of mind operated by psychological energy, like sense perception, denying “cognition as the function of *ji*.” In general, he used the term physical energy (*hyeonggi*) in ethical context. As a result, his insistence gave

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發，或爲性命而發也。栗谷未嘗如此明白說破，故終不能解牛溪之所疑也” (*Eorok* 語錄, vol. 3 of *Nongamjip byeoljip*).

7. “蓋曰氣之虛靈，自會知覺，初不干仁義禮智事也” (“Yeo Yi Dong-bo 與李同甫,” in *Nongamjip*, vol. 13).

rise to a split between cognition and morality. Since the cognitive theory of Kim Chang-hyeop became a hot issue in learned circles about this time, Yi Ik could not but challenge the project of the Yulgok School as a member of the Toegye School.

### Cognitive Functions of *Jigak*

Fundamentally, Yi Ik also considered the Four-Seven Debate—including the theme of moral mind and human mind—from a cognitive perspective. He regarded the Four Beginnings as manifestations of moral mind and the Seven Feelings as manifestations of human mind. According to him, *ibal* indicated the consciousness that one should follow social norms, while *gibal* referred to the private feelings brought about by individual desire. Therefore, the Four Beginnings and the Seven Feelings should be distinguished according to the content of cognition. Considering that point, it goes without saying that the thought of Yi Ik was in line with Yi Hwang's theory of mutual manifestation.

Nevertheless, Yi Ik distinguished himself from Yi Hwang in some respects. Whereas Yi Hwang regarded human cognition as a sort of transcendental faculty, Yi Ik had a relative tendency to consider cognition a natural and psychological function.<sup>8</sup> For instance, Yi Ik stated that “it is not necessary to learn the Seven Feelings. . . . However, the Four Beginnings cannot be done well without learning.”<sup>9</sup> Although this assertion emphasized learning and cultivation, he also stressed the importance of natural inclination in the basic cognitive functions. If cognition was kept in fetters, even the Four Beginnings would eventually disappear as immediate feelings. While the more developed embodiment of cognition was dependent on learning and cultivation, cognitive function was fundamentally based on

8. Yi Ik sometimes made use of the term *gigwal* 機括 to mean “psychological mechanism of mind.” This was an influence of the Yulgok School.

9. “Seonghyeon ji chiljeong 聖賢之七情,” ch. 4 of *Sachil sinpyeon* (New Book on the Four-Seven Debate). See also Yi ([n.d.] 1999, 33).



psychological structure linked to the body.<sup>10</sup> Thus, to a considerable extent, Yi Ik admitted the naturalism and psychologism of the Yulgok School.

Furthermore, Yi Ik also differentiated himself from Yi Hwang as he reconsidered the problem of cognitive process.<sup>11</sup> According to Yi Ik, the cognitive process formed by the union of *i* and *gi* has only “one course, with *i* manifesting and *gi* following.” This means that all the Four Beginnings and the Seven Feelings are formed through a certain process, and through that process psychological energy is supervised by rational principle, as the basis of thinking. His insistence ran completely opposite to the core argument of the Yulgok School that cognition has only “one course, with *gi* manifesting and *i* riding.” However, Yi Ik asserted that “if viewed from the perspective of something that exists only in the Seven Feelings, not in the Four Beginnings, the basis of the Seven Feelings is merely the manifestation of individual physical energy.”<sup>12</sup> In this vein, the Four Beginnings can be called *ibal*, designating the direct manifestation of principle without the interference of physical energy, whereas the Seven Feelings can be called *gibal* on account of the interference of physical energy. This implies that Yi Ik accepted the distinction between psychological and physical energy. Such acceptance was definitely revealed in his “Jungbal 重跋” (Second Postscript) written in 1741, wherein Yi Ik officially accepted the proposal of Shin Hu-dam 慎後聃 (1702–1762) and explained the theory of Yi Hwang by means of the distinction between psychological and physical energy:

It is ultimately good to say that the Four Beginnings are *ibal* and the Seven Feelings are *gibal*. The Four Beginnings belong to *ibal*, as they are direct manifestations with no interference from physical energy. The Seven Feelings fall under *gibal*, as *i* manifests itself due to physical energy. Is not *gibal* either a manifestation of *i*? When Toegye came to deal with it, he said “*i* manifests and *gi* follows” and “*gi* manifests and *i* rides.” “*Gi follows*” denotes

10. Yi Ik's tendency to take a serious view of individuality and physicality was already evidenced in his debate with Yi Sik 李栻 (1659–1729). On this, see Moon (2009, 5–20).

11. Ahn (1999, 41) has dealt with this point from the perspective of the “sublation of *hobal* 互發 theory and *sangsu* 相須 theory.” However, the fundamental intention of Yi Ik was to supplement the *hobal* theory with a coherent explanation of the process of cognition.

12. “Sachil yuiui 四七有異義,” ch. 7 of *Sachil sinpyeon*. See also Yi ([n.d.] 1999, 56).

*mind energy, whereas "gi manifests" belongs to body energy.*" Therefore, I wrote as follows [in *Sachil sinpyeon*]: "The explanation that '*i* manifests and *gi* follows' refers to a common process between the Four Beginnings and the Seven Feelings. However, the Seven Feelings have one more layer of sprouting before '*i* manifests.' It is so-called individual physical energy." My friend Shin I-ro understands its meaning.<sup>13</sup> (italics added)

In the above passage, Yi Ik divided the Four Beginnings and the Seven Feelings in relation to the interference of physical energy that could influence feelings negatively in moral context. He had revised *Sachil sinpyeon* constantly since the manuscript was first written in 1715. The problem of distinguishing between physical and psychological energy was one of the main reasons leading him to revise it ceaselessly. In "Dap Shin I-ro 答慎耳老" (Reply to Shin Hu-dam) written in 1741, Yi Ik repeatedly stated that he had considered the problem of reinterpreting the theory of Yi Hwang:

This paragraph<sup>14</sup> is so excellent in its understanding that I cannot help respecting and admiring it. However, it would probably be careless to regard that my theory shows the same conclusion [as Toegye's]. The boundary of my insistence only depends upon this theme. Because it is in relation with this theme, I said as follows [in *Sachil sinpyeon*]: "The explanation that '*i* manifests and *gi* follows' refers to the process common to the Four Beginnings and the Seven Feelings. However, the manifestation of *gi* in the Seven Feelings has one extra layer of sprouting before '*i* manifests and *gi* follows.'" As the *gi* in the manifestation of *gi* is physical energy, it is not the same as the *gi* in "*i* manifests and *gi* follows." That is to say, [in the case of the Seven Feelings] the cognition formed by "*i* manifests and *gi* follows" is a manifestation caused by physical energy. In a recent

13. "Jungbal," in *Sachil sinpyeon*. See also Yi ([n.d.] 1999, 167–168).

14. The "paragraph" from Shin's letter reads as follows: "The *gi* which *i* rides in the manifestation of the Four Beginnings is the *gi* of cognition, while the manifestation of *gi* in the Seven Feelings is the *gi* of physical energy. Therefore, what the *gi* in the two cases designate are different essentially. Since the explanation of Toegye on the mutual necessity of *i* and *gi*, we could not have avoided confusing them" (來論云, 四端發處所乘之氣, 是知覺之氣, 七情氣發, 是形氣之氣, 兩氣字所主本異, 而自退溪理氣相須之說, 未免混淪) ("Dap Shin I-ro 答慎耳老," in *Seongho jeonjip*, vol. 23).

reply to someone, I said: “There is large *gi* and small *gi*. *Gi* as physical energy belongs to body, while the *gi* of ‘*gi* follows’ belongs to mind. *Physical energy is large, while psychological energy is small.*”<sup>15</sup> As my theory is more accurate than the former, I hope you may review and reconsider it.<sup>16</sup> (italics added)

Yi Ik had already felt the need to explain the theory of Yi Hwang on the basis of the distinction between psychological and physical energy before Shin Hu-dam raised the problem. It suggests that he had been aware of Kim Chang-hyeop’s thought from early on. However, Yi Ik did not merely accept the distinction between psychological and physical energy. He went on to develop a counterargument to the theory of Kim Chang-hyeop. For example, he linked the distinction between psychological and physical energy to his own theory on large *gi* and small *gi*. According to this theory, physical energy is large *gi* corresponding to body as a whole, whereas psychological energy, which controls the cognitive function based on the organ of heart, belongs to small *gi*. Yi Ik thought that the psychological energy as small *gi* is interconnected with physical energy, through which mind can respond to the external world.<sup>17</sup> Therefore, when Yi Ik explained the Seven Feelings by

15. “Dap Yi Yeo-gyeom 答李汝謙,” in *Seongho jeonjip*, vol. 17. *Hyeonggi* includes all the meanings of “physical body” and “physiological energy,” but not solely “physiological energy.”

16. “此段見得卓然，深所欽歎，又以鄙說爲同歸，抑其未察矣，灑所主張分界，專在乎此，其曰理發氣隨，四七同然，若七情之氣發，則於理發氣隨上，更有一層苗脈者是也，這氣也是形氣也，與理發氣隨之氣不同，謂理發氣隨之知覺，因形氣而發也，近有答人書云氣有大小，形氣之氣屬之身，氣隨之氣屬之心，形大而心小也，比前加密，願更入思議焉” (“Dap Shin I-ro,” in *Seongho jeonjip*, vol. 23).

17. “氣者有一身混淪之氣，有心臟運用之氣，雖同一氣也，而有大小之別，不但心也，凡頭目之類皆然” (“Dap Yi Yeo-gyeom,” in *Seongho jeonjip*, vol. 17). It is not only the *gi* of heart, but also the *gi* of all other organs that can be called small *gi*. According to Yi Ik, the small *gi* of different organs are interconnected with one another in the body, with each fulfilling specific functions. The small *gi* of eyes, which fulfills the function of sight, is connected to the small *gi* of brain through the large *gi* of body. Brain is regarded as the organ in charge of sense perception. On this, see S. Kim (2014, 84). Kim only connected this point to Western medicine without mentioning Kim Chang-hyeop. However, Yi Ik indeed took advantage of Western medicine to refute the sharp division between *simgi* and *hyeonggi* in the theory of Kim Chang-hyeop, because Western medicine had the doctrine that brain as *hyeonggi* could control action and sensation. Kim Chang-hyeop thought of sense perception as the function of *simgi*.

means of the interference of physical energy in an ethical context, he kept in mind a sense perception process through mediating physical energy in an epistemological context. In other words, the sense perception level was a prerequisite for the next two levels: emotional response level and cognitive completion level. Yi Ik said as follows:

Ears can hear, eyes can see, and mind can cognize. When hearing, one knows the sound one hears, and when seeing, one knows the color one sees. However, this state is designated as “stillness” if feelings such as love and hate are not invoked in the mind. “Stillness” is “not manifested.” . . . Mind is spiritual and bright like a mirror reflecting things. So how is it unable to know if it is black or white, a circle or a square? *If feelings such as love and hate did not grow from knowing black and white, a circle and a square, there would not be any problem in denoting “not manifested.”* When things come in and mind is in the “already manifested” phase, the “not manifested” phase no longer exists. . . . We should say that, even when a thing does not come to mind, “the principle of cognition” originally exists. *When a thing comes to mind, if it is white, one can see its whiteness immediately, and if it is black, one can also perceive its blackness at once. That phase belongs to the still state before movement. The phase when one thinks what the white thing is, what the black thing is, what name it has, how it exists, how it should be treated, can be called the “manifested” (bal 發).* The manifested phase is “movement.” Therefore, although one perceived a thing, the phase before thinking would belong to the still state of mind.<sup>18</sup> (italics added)

According to the above passage, the “manifested” state of mind corresponds to the function that feelings and emotions occur and thinking can work on the ground of the pure perception on an object. Therefore, the cognition of mind as a whole can be composed of two phases and three levels. The phase of “not manifested” is the first level, in which one merely perceives an

18. “耳有聞，目有見，而心有知覺。聞而知其爲聲，見而知其爲色，心未嘗動愛惡之情，如此者不害爲靜。靜便是未發。 . . . 心本靈明，如物之照鏡，寧可使不知其白黑方圓耶？知其爲白黑方圓，而不萌愛惡之情，何害爲未發？物來而便成已發，則是心未有未發時節矣。 . . . 如物之未來，當云知覺之理自在，物既來矣，白便知白，黑便知黑，皆在未動之前，然後方始思量白黑之何物何名何有以有以處，是之謂發。發者動也，當其未思量之前，雖有知覺，心固寂然矣” (“Jigak 知覺,” in *Seongho saseol*, vol. 24).

object, e.g., knowing whether something is white or black. The phase of “already manifested” can be divided into the next two levels: the second level corresponds to the emotional response, which is able to be represented by “*gi* manifests and *i* rides”; the third level indicates the completion of cognition through thinking, which can be described as “*i* manifests and *gi* follows.” It is a very unique perspective to regard “not manifested” as the sense perception level at which mind can know a thing as it is through the mediation of sense organs and physiological material of body.<sup>19</sup>

The consideration of “not manifested” by Yi Ik as the sense perception level through the mediation of physical energy (sense organs and physiological material) was related to Western medicine he came across at that time. Yi Ik had become very interested in *Zhuzhi qunzheng* 主制群徵 (Evidences Testifying Divine Providence) of Johann Adam Schall von Bell (1591–1666; Chinese name: Tang Ruowang 湯若望), who introduced Western medicine to East Asia.<sup>20</sup> Furthermore, in “Seogugui 西國醫” (A Western Doctor), one of the chapters from *Seongho saseol yuseon* 星湖僊說類選 (Selections from the *Miscellaneous Discussions of Seongho Yi Ik*), Yi Ik had excerpted and explained some medicine-related passages from *Zhuzhi qunzheng*. In this work, Yi Ik paid attention to *donggak ji gi* 動覺之氣, a part of physical energy concerning action and sensation.<sup>21</sup> Admitting the Western medical doctrine

19. Zhu Xi divided the cognition of “already manifested” into sense perception and reflective thinking. However, unlike Yi Ik, he never thought of “not manifested” as sense perception.

20. *Zhuzhi qunzheng* (1629) was not Adam Schall’s own writing, but the Chinese translation of *De Providentia Numinis* (Divine Providence) (1613) of Leonardus Lessius (1554–1623). *De Providentia Numinis* was a work claiming to demonstrate the existence of God through natural phenomena, including the human anatomy. On the medical contents of *Zhuzhi qunzheng* and its influence on Korean intellectuals, see Yeo (2012) and Shin (2009).

21. *Donggak ji gi* is the translation of “psychic pneuma,” which is the physiological material or energy related to actions and sensation. “Pneuma” is an ancient Greek word for “breath,” but it is distinguishable from “psyche” (mind), which refers to a psychological object. In this regard, the distinction between pneuma and psyche is similar with that between physical energy (*hyeonggi*) and psychological energy (*simgi*). *Donggak ji gi* was formed and controlled by brain, while “natural pneuma” (*cheseong ji gi* 體性之氣; “helping blood circulation”) and “vital pneuma” (*saengyang ji gi* 生養之氣; “preserving heat”) were related to liver and heart, respectively. Adam Schall translated as follows: “Again, about 10–20 percent

that brain could control this type of physical energy, Yi Ik commented as follows: “As the power of sinews and nerves are able to operate a hundred parts of the body, it is clear that *gi* of motion is controlled by brain. Nevertheless, to add the character of *gak* 覺 [in *donggak ji gi*] is not the same with the explanation of Confucians. . . . Because we have brain, when we suddenly touch something we instantly move in astonishment without thinking. This action is what brain causes. However, it is mind that is conscious of a reflex action to a sudden touch of a thing. Therefore, sensation depends on brain, whereas awareness relies on mind. That theory is also reasonable.”<sup>22</sup> That is, Yi Ik regarded the brain, which could make and control *donggak ji gi*, as an organ in charge of reflex actions and immediate perception before emotional response and thinking. Nevertheless, he insisted that, since “awareness relies on mind,” the psychological energy based on heart was related to the supervision of cognitive function as a whole. This means that Yi Ik did not controvert the traditional Confucian doctrine, which regarded heart as an organ related to the intellectual function of mind (Yeo 2012, 269).

Though there is no doubt today that not only sense perception but also the higher level cognitive functions depend on brain, the Western medicine of *Zhuzhi qunzheng* was considered new scientific knowledge by Yi Ik, who had long been immersed in the problem of the relationship between psychological and physical energy. Based on the Western medical doctrine that brain could control actions and sensation by means of *donggak ji gi*, he reinterpreted “not manifested” as the sense perception level through the mediation of physical energy. With regard to “already manifested,” he

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of the pneuma go up into the brain from the central nerves, and become the *gi* of motion and sensation after being transformed into a finer and more minute state. They make the five sensory organs sense and the four limbs move to play each of the two roles” (又此露一二分，從大絡升入腦中，又變愈細愈精，以爲動覺之氣，乃令五官四體動覺，各得其分矣) (“Yirenshe xiangzhi 以人身向微,” chap. 5 in vol. 1 of *Zhuzhi qunzheng*). Ahn (2004, 503–504) regarded *donggak ji gi* as *simgi*, although it in fact belonged to *hyeonggi*.

22. “筋之力可以運用百體，則其動氣之由乎腦明矣。但添一覺字，與儒家說不同。 . . . 有腦故物觸之時，不待思量，便即惕動者，腦之爲也。知其有物觸而然者心也。然則覺在腦而知在心，其理亦宜耳” (“Seogugui,” in *Seongho saseol yuseon*, vol. 5). On the discourse concerning the function of brain between Yi Ik and Shin Hu-dam, see Kang (2003).

explained that the feelings generated by individual desire (human mind) passed through the interference of physical energy, whereas the Four Beginnings—as the consciousness of “ought to” (moral mind)—jumped to the level of “*i* manifests and *gi* follows” without interference of physical energy. Although brain as physical energy could control sense perception, since psychological energy based on heart was related to the supervision of mind on all the cognitive processes, the distinction between psychological and physical energy resulted not in a split, but in their interrelationship. The next section will examine Yi Ik’s endeavor to recombine cognition to the *ji* (wisdom) of human nature. Yi Ik explained *ji* as the source of moral content and the foundation of integrated cognition from the perspective of Zhu Xi and Yi Hwang.

### ***Ji* (Wisdom) as the Foundation of Integrated Cognition**

In “Simseol 心說” (Treatise on Mind), wherein he established his theory of mind, Yi Ik classified mind into three types: “biological mind” (*saengjang ji sim* 生長之心), “perceptive mind” (*jigak ji sim* 知覺之心),<sup>23</sup> and “the mind of moral principle” (*uiri ji sim* 義理之心). Plants only have “biological mind,” as they merely perform biological functions, such as birth, growth, and death. Animals have not only “biological mind” but also “perceptive mind” which is able to know coldness or heat, life or death, and love or hate. Unlike them, human beings possess “the mind of moral principle” in addition to biological and perceptive minds.<sup>24</sup> The classification of the three kinds of minds implied his acknowledgement of the perspective of Xunzi, not Catholi-

23. The term *jigak* here actually means “perceptive” or “sensory.” Since it is different from the “cognition” explained thus far, I will render it into “perceptive mind.” This usage was meant to critique the concept of *jigak* of the Yulgok School.

24. According to Yi Ik, “biological mind” of plants could not be called “mind” in the strictest sense, as mind necessitates an intention (*ui* 意) related to heart, which all sentient beings must have. For the same reason, Yi Ik insisted that the “mind of the heaven and earth” (*cheonji ji sim* 天地之心) could not be regarded as mind (“Simseol,” in *Seongho jeonjip*, vol. 41).

cism,<sup>25</sup> while the naturalism and psychologism shown in his cognitive theory were, in part, the result of influences from the Yulgok School. Nevertheless, his explanation on moral cognition differed from that of the Yulgok School. In asserting that moral mind was an awareness of heavenly mandate, Yi Ik ultimately followed Zhu Xi and Yi Hwang.

Since perceptive mind stops after knowing and realizing something, its function is no more than going forward to seek profit and avoiding damage. In case of human beings, it is “human mind.” If a person lets himself always be guided by the heavenly mandate of “ought to do,” he would desire the good more than life itself and would hate evil more than death itself—what is called “moral mind.” Therefore, compared to plants, human beings also have “biological mind.” In comparison with animals, human beings also have “perceptive mind.” However, plants and animals do not have “moral principle mind.” . . . Thus, I would say that human beings have “biological mind” of plants and “perceptive mind” of animals, but *they should control the two minds with the “mind of moral principle.”*<sup>26</sup> (italics added)

Cognitive function primarily reveals human mind as “perceptive mind,” which is animal inclination or the psychological process of “going forward to seek profit and avoiding damage.” However, the same cognitive function can be aware of the rules of “ought to do” as heavenly mandate. Anyone with the cognitive function is also able to assume the duty of complying with the rules as the supervising power in all events and behaviors. That is

25. “Simseol,” in *Seongho jeonjip*, vol. 41; and “Bal Sunja 跋荀子” (Postscript to *Xunzi*), in *Seongho jeonjip*, vol. 54. Ahn (2004, 508) states that the classification into three minds by Yi Ik was strongly influenced by the doctrine of three souls in Catholicism, and S. Kim (2014, 92) even asserts that “he accepted it.” However, although Yi Ik received some stimuli from Catholicism, he never accepted the doctrine of soul, to say nothing of the immortality of soul. In general, Yi Ik took a critical stance against Catholicism, while treating Western science and technology in a friendly manner.

26. “知覺之心，知之覺之而止，故其用不過乎趨利避害，在人則人心是也，若人者必以天命所當然者為主宰，而欲或甚於生，惡或甚於死則道心是也，故人者較之於草木而均有生長之心，較之於禽獸，而亦均有知覺之心，其義理之心，則彼草木禽獸所未有也. . . 故曰，人也者，草木之生長，禽獸之知覺，並有，而又御之以義理之心焉” (“Simseol,” in *Seongho jeonjip*, vol. 41). This passage indicates that in moral theory, Yi Ik ultimately followed the position and frame of Zhu Xi.



“moral mind” as ethical consciousness. Human beings should control human mind with moral mind. The content of moral mind as the consciousness of “ought to do” has an essentially different source from human mind, the root of which is the individual desire of physical body. Concerning how a single psychological mechanism could manifest as the two opposite modes of consciousness, Yi Ik explained:

In fact, human mind and moral mind exist as the two modes of consciousness. There is no mind other than those. Among the five viscera, the character of *sim* 心 (mind) originally refers to heart. Only humans and animals have a heart, while plants do not from the beginning. Mind is the means through which human nature manifests. Human nature provides moral principle, but mind is psychological energy. Therefore, if moral principle directs psychological energy, then cognition is in accord with moral principle, and it becomes the mind of moral principle. If psychological energy pulls to one side and moral principle becomes turbid, then only perceptive mind remains. That is the same as the mind of birds and beasts.<sup>27</sup>

“Perceptive mind” refers to animal actions caused out of physical energy, which is connected with psychological energy in heart. However, since psychological energy includes human nature containing moral meaning, mind can become moral if one realizes the intrinsic rules of “ought to do” in human nature. If mind cannot awaken to the rules of “ought to do” on account of animal inclination and the turbidity of human nature caused by psycho-physical energy, the cognition of mind will be no more than the animal inclination and psycho-physical operations. Whether the cognitive function can realize the rules of “ought to do” is the key to jumping from human mind to moral mind. Meanwhile, we can find some influence from the Yulgok School in his comment that “human nature provides moral principle but mind is psychological energy.” However, Yi Ik essentially parted from the Yulgok School in that he thought of the principle (human nature)

27. “人心道心，固有此兩樣，外此無心也，心本五臟之一，惟人與禽獸有之，草木未始有也，心者載性者也，性理而心氣，故理御于氣，則知覺循乎理，而為理義之心，氣偏理味，則只有知覺之心，而同乎禽獸” (“Simseol,” in *Seongho jeonjip*, vol. 41).

as the original substance of mind that could govern psychological energy.<sup>28</sup> In other words, the original substance is the source from which the rules of “ought to do” manifested, and the virtue that could supervise the cognitive abilities.

In particular, his consideration of *ji* (wisdom), a principle of human nature, as the virtue governing cognition was distinctly evidenced by his appreciation of the annotation of Hu Yunfeng 胡雲峯,<sup>29</sup> which had previously been criticized by Kim Chang-hyeop.<sup>30</sup> When a disciple of Yi Ik asked him how to understand the notes of Hu Yunfeng,<sup>31</sup> he answered: “Originally, there is the principle of cognition. Based on that principle, a gentleman can extend his cognition and knowledge. The ability to extend and know is mind, whereas the principle is called human nature. I could discern no error in Hu Yunfeng’s note.”<sup>32</sup> In contrast with Kim Chang-hyeop, who denied the principle of cognition, Yi Ik thought of *ji* as the latter. *Ji* as the principle of controlling cognition cannot stand for only formal categories or abstract principles. It should be the foundation of supervision on which mind can operate its cognitive abilities, discriminate among principles of things, and realize the rules of “ought to do.”

Concerning the notes of Mr. Hu and Mr. Shen on the concept of *ji*, the explanation of Kim Chang-hyeop also seems to have some understanding. However, in general, *ji* refers to the principle underlying discrimination. The term “discriminating” in fact refers to distinguishing the differ-

28. “Simche 心體,” in *Seongho saseol*, vol. 14.

29. “雲峯胡氏曰，‘智則心之神明，所以妙衆理而宰萬物者也，’ 番易沈氏云，‘智者，涵天理動靜之機，具人事是非之鑑’” (“Xu xiaozhu 序小註” in *Daxue zhangju daquan* 大學章句大全).

30. “竊謂兩說，只說得心之知覺，與智字不相干涉，智乃人心是非之理，確然而有準則者也，知覺則此心虛靈之用，神妙而不可測者也，夫以知覺專爲智之用，猶不可，況直以言智可乎，且智則理也，而謂之妙衆理，謂之涵天理，則是以理妙理，以理涵理，恐尤未安也” (“Dap Min Eon-hwi 答閔彥暉,” in *Nongamjip*, vol. 14). The point of critique by Kim Chang-hyeop is that the notes of Hu and Shen are actually for *jigak* (cognition), not *ji* (wisdom).

31. “嘗見序中仁義禮智小註，雲峯胡氏，取朱子之意釋智字曰云云，此是訓致知之知字。而此乃訓智，似有心性之分體用之別，未嘗不致疑，而亦不得究其說矣。近來偶見金農巖集則亦有以此說，與人辨難，而適有契於愚見，未知其所論說何如?” (“Dap Mok Sa-mu 答睦士懋,” in *Seongho jeonjip*, vol. 16).

32. “原有知之理，故君子從而致其知焉，能致而知者心也，而其理謂之性，雲峯之釋，未見其非” (“Dap Mok Sa-mu,” *Seongho jeonjip*, vol. 16).

ent principles of things and events. As Hu Yunfeng's so-called "many principles" designate the principles of things and events, I think that it is not related with Kim's so-called "mystically operating principle by means of principle" [meaning to lie one principle upon another]. . . . Although Hu Yunfeng's so-called "mystically operating" and "supervising" represent the function of cognition, *the reason [soi 所以] for "mystically operating" and "supervising" would be none other than ji. Considering the two characters of soi, Hu's annotation seems to be relevant.* The key lies only in the two characters of *sinmyeong* 神明 [mysterious and bright].<sup>33</sup> (italics added)

Kim Chang-hyeop thought that, as psychological energy is able to cognize for itself, mind does not require *ji* as "the principle of cognition." For Kim, *ji* is only the moral principle, which one needs to realize. By contrast, Yi Ik asserted that all cognitive functions, including distinguishing, are able to work only on the basis of *ji* as "the principle of cognition." As *ji* was not the same with the principles of external things and events, Yi Ik criticized as incorrect the comment of Kim Chang-hyeop, who said "mystically operating principle by means of principle." In other words, since *ji* is the basis (*soi*) of cognitive function of mind that is able to distinguish, know, and mystically operate and supervise the principles of things and events, it is the internal principle with a "mysterious and bright" quality. *Ji* has mind govern cognition. That is, *ji* is an intellectual virtue. In this vein, Yi Ik interpreted a passage about *jigak* in *Daxue huowen* 大學或問 (Questions and Answers on the *Great Learning*) as discussing the implication of *ji*:

Although there was a distinction between *ji* 知 and *ji* 智, the phrase "something to mystically operate many principles and to supervise all things and events"<sup>34</sup> [in *Daxue huowen*] must have referred to one of the four virtues (*sadeok* 四德). This phrase from *huowen* is certainly a clear interpretation of *ji* 智. Thus, one should not add or remove one stroke to

33. "至於胡沈智字之釋, 金說亦似有見, 蓋智者即別之理, 別字亦分別事物之理也. 雲峯所謂衆理者, 乃指事物之理, 則彼所謂以理妙理者, 疑若不相契矣. . . . 雲峯所謂妙與宰者, 雖知覺之用, 而所以妙所以宰則智也, 看所以二字, 亦似稱停. 其要只在神明二字" ("Dap Mok Sa-mu," in *Seongho jeonjip*, vol. 16).

34. "若夫知則心之神明, 妙衆理而宰萬物者也" ("Jing yizhang 經一章," in *Daxue huowen* 大學或問, vol. 1).

the character while distrusting it.<sup>35</sup> (*italics added*)

In a nutshell, Yi Ik argued that the reason and foundation of all cognitive functions, including moral consciousness, is none other than *ji*, which means “mystical and bright” wisdom. Unlike Kim Chang-hyeop, who confined *ji* to the moral principle or criterion for judging the right and wrongs of ethical events, Yi Ik regarded it as the source of moral consciousness and wisdom that could control cognitive function as a whole. He was sharply opposed to Kim Chang-hyeop in that he conceived of *ji* as an intellectual virtue that could integrate cognition and morality. His view on *ji* was generally in line with the perspective of Zhu Xi and Yi Hwang. Nonetheless, it is quite original in that he attempted to connect *ji* as an intellectual virtue to cognition on the basis of a naturalistic view.

## Conclusion

In the eighteenth-century Joseon dynasty, Seongho Yi Ik presented his own original cognitive theory, a subject that was a hot topic in the philosophical debates of the time. By making a distinction between *simgi* (psychological energy) and *hyeonggi* (physical energy), Kim Chang-hyeop, who based his theory on the perspective of Yi I, criticizing Yi Hwang, separated *jigak* from *ji* and cognition from morality in the course of integrating the two positions in cognitive theory. In response, Yi Ik suggested a new theory, which integrated cognition and morality while accepting the distinction between psychological and physical energy.

Yi Ik reinterpreted the “mutual manifestation” theory of Yi Hwang by using the distinction between psychological and physical energy. According to him, “*gi* follows” stands for psychological energy while “*gi* manifests” refers to physical energy. All types of cognition are formed through the one course of “*i* manifesting and *gi* following,” which implies a kind of conceptu-

35. “知與智雖有分別，其曰‘妙衆理而宰萬物者’，豈非四德之一耶？或問一條，分明是智字之明釋，不可以字畫添刪而疑之也” (“Dap Mok Sa-mu,” in *Seongho jeonjip*, vol. 16).

alization process. However, the Seven Feelings (human mind) receive the interference of physical energy prior to that process. At that time, sense perception is also set up to represent the level prior to the interference of physical energy. Taking advantage of Western medicine of the period, Yi Ik insisted that brain, which was associated with physical energy, could control reflex action and sense perception. His reference of Western medicine was to show that physical energy was also connected with cognition. However, his utilization of Western medicine ends there. The mind, which consists of psychological energy based on heart, ultimately supervises all the processes of cognition, including sense perception. In contrast to Kim Chang-hyeop, psychological and physical energy are interrelated with each other in the theory of Yi Ik.

Yi Ik's reconnecting cognition to wisdom (*ji*) again reveals the endeavor to integrate cognition and morality. Yi Ik regarded *ji* of human nature as the source of moral consciousness and the intellectual virtue that governed the entire process of cognition and enabled us to use our cognitive abilities. In this regard, *ji* is the foundation for integrating cognition and morality. Although the cognitive theory of Yi Ik partly accepted the naturalism and psychologism of the Yulgok School, it generally inscribed itself in the lineage of the perspective of Zhu Xi and Yi Hwang. Therefore, the cognitive theory of Yi Ik achieved a historical status as a response of the Toegy School to Kim Chang-hyeop, a member of the Yulgok School. Furthermore, his cognitive theory can be regarded as a creative theory unifying fact and value.

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**REFERENCES**
**Primary Sources**

- An, Jeong-bok, ed. [n.d.] 1929. *Seongho saseol yuseon* 星湖僊說類選 (Selections from the *Miscellaneous Discussions of Seongho Yi Ik*).
- Hu, Guang 胡廣, et al., comp. n.d. *Daxue zhangju daquan* 大學章句大全 (Collection of Great Learning in Chapters and Verses).
- Kim, Chang-hyeop. 1709. *Nongamjip* 農巖集 (Complete Works of Nongam Kim Chang-hyeop).
- Yi, Ik. [n.d.] *Seongho saseol* 星湖僊說 (Miscellaneous Discussions of Seongho Yi Ik).  
 \_\_\_\_\_, [n.d.] 1922. *Seongho jeonjip* 星湖全集 (Complete Works of Seongho Yi Ik).  
 \_\_\_\_\_, [n.d.] 1999. *Yeokju sachil sinpyeon* 譯註四七新編 (Annotated Translation of *New Book on the Four-Seven Debate*). Translated by Lee Sang-ik. Seoul: Daunsaem.
- Schall, Adam. 1629. *Zhuzhi qunzheng* 主制群徵 (Evidences Testifying Divine Providence). <http://archives.catholic.org.hk/Rare%20Books/EJC/index.htm>.
- Zhu, Xi. n.d. *Daxue huowen* 大學或問 (Questions and Answers Concerning the *Great Learning*).  
 \_\_\_\_\_, [n.d.] 1996. *Zhu Xi ji* 朱熹集 (Collected Works of Zhu Xi). Chengdu: Sichuan Jiaoyu Chubanshe.

**Secondary Sources**

- Ahn, Young-sang. 1999. "Seongho Yi Ik-ui sadan chiljeongseol" (Seongho Yi Ik's Theory on the Four-Seven Debate). *Dongyang cheolhak* (Journal of Asian Philosophy in Korea) 11: 41–69.
- \_\_\_\_\_. 2004. "Dongseo munhwa-ui yunghap chungdol gwajeong-e natanan seongho hakpa-ui cheolhakjeok teukjing-ui ildanmyeon: inchegwang-e natanan pneuma-wa simgiron-eul jungsim-euro" (A Study on the Seongho School in the Process of Fusion and Conflict between Western and Eastern Culture: With a Focus on Pneuma and the Theory of Psychological Energy). *Minjok munhwa yeongu* (Korean Cultural Studies) 41: 489–529.
- Kang, Byung-soo. 2003. "Seongho Yi Ik-gwa Habin Shin Hudam-ui seohak damnon" (A Study on the Debate of Western Learning between Yi Ik and Shin Hudam). *Hanguk silhak yeongu* (Korean Silhak Review) 6: 29–62.
- Kim, Seon Hee. 2014. "Sincheseong, ilsangseong, silcheonseong, gonggongseong: Seongho Yi Ik-ui simhak" (Physicality, Dailiness, Practicability, and Public-

- ness: The Mind-and-Heart Theory of Seongho Yi Ik). *Hanguk silhak yeongu* (Korean Silhak Review) 28: 77–123.
- Kim, Woo-hyung. 2005. *Zhu Xi cheolhak-ui insingnon: jigangnon-ui hyeongseong gwajeong-gwa geu chegye* (Epistemology in Zhu Xi's Philosophy: Formation and System of Cognitive Theory). Seoul: Simsan.
- \_\_\_\_\_. 2013. "Zhu Xi insim dosimnon-ui yullihakjeok seonggyeok-e daehan gochal: boncheron bipan mit jigangnon-ui jeongnip-gwa gwallyeon-hayeo" (An Inquiry into the Ethical Characteristics of Zhu Xi's Theory of Human Mind and Moral Mind: In Relation to His Critique of *Benti* Theory and Establishment of *Zhijue* Theory). *Dongseo cheolhak yeongu* (Studies in Philosophy East-West) 69: 159–187.
- \_\_\_\_\_. 2014. "Kim Chang-hyeop-ui jigangnon-gwa toeyul jeolchungnon-ui gwangye-e daehan ilgochal" (A Study of the Relationship between Kim Chang-hyeop's Theory of *Jigak* and His Compromise on Yi Hwang and Yi I). *Hanguk cheolhak nonjip* (Journal of Korean Philosophical History) 40: 69–93.
- Lyu, In-Heui. 1985. "Seongho saseol-ui cheolhak sasang: jeongju ihak-gwau bigyo yeongu" (Philosophical Thought of *Miscellaneous Discussions of Seongho Yi Ik*: Its Comparative Study with Cheng-Zhu's Neo-Confucianism). *Jindan hakbo* (Journal of the Jindan Historical Society) 59: 157–175.
- Moon, Suk-Yoon. 2009. "Seongho Yi Ik-ui simseol-e gwanhayeo: Oeam Yi Sik-ui 'dangsilmyeong'-e daehan bipan-eul jungsim-euro" (Theory of Mind of Seongho Yi Ik Viewed through His Critique of Oeam Yi Sik's "Tangshiming"). *Cheolhak yeongu* (Journal of the Society of Philosophical Studies) 86: 5–31.
- Shin, Dongwon. 2009. "Korean Medical Discourses on Western Medicine, 1720–1876." *Dasanhak* (Journal of Tasan Studies) 15: 181–218.
- Takahashi, Toru 高橋亨. 1999. *Joseon-ui yuhak* (Korean Neo-Confucianism). Translated and edited by Cho Nam-ho. Seoul: Sonamu.
- Yeo, In-seok. 2012. "'Juje gunjing'-e natanan seoyang uihak iron-gwa jungguk-gwa joseon-eseoui suyong yangsang" (*Zhuzhi qunzheng*, the Jesuit Translation of Western Medicine and Its Influence on Korean and Chinese Intellectuals). *Uisahak* (Korean Journal of Medical History) 21.2: 251–277.