A Study on the Modernity of Ch’oe Han-gi’s Philosophical Thought*

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1. Introduction

Ch’oe Han-gi (1803-1877) is a philosopher who systematized the dominant, incoming western science and the later 18th century tradition of silhak (practical learning) within the framework of kihak. Although his efforts and contribution to Korean philosophy have been pivotal, there has been a notable lack of serious commentary.

His philosophy was brought to attention by the description of it as a materialism in history of Chosŏn philosophy published in 1960. His philosophy was otherwise described as an empiricism by Pak Chong-hong in 1965. Study of his philosophy, natural science, and social science by the intellectual community begins from this time. But it would seem that the present state of his reception is something of a standoff. For example, his philosophy, on the one hand, has been interpreted as ‘the bridge between practical science and enlightened thinking’; on the other hand, it has been defined as tongdosŏgi-ron, which means accepting Western Technology and Sciences but maintaining Eastern Morality. Most scholars, however, are in agreement with the interpretation of empiricism inspired by Pak Chong-hong. On

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*This paper was sponsored by the Fund for Academic Research from POSCO

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1. Ch'ong Sŏng-ch'ŏl, Chosŏn Ch'ŏlhaksŏ [History of Korean Philosophy], p 269


this interpretation, on the one hand, his philosophy is taken in a historical context as somewhere between practical science and enlightened thinking. On the other hand, in a history of ideas context, it is seen as joining together traditional confucianism and modern ideas. Philosophically, Ch’oe’s position is here regarded as an innovative philosophy comprehending new science whilst also adhering to the tradition of chi philosophy in Chosŏn dynasty. Scholars have tended to see Ch’oe’s philosophy either as arising from Chosŏn confucianism or as separate from strands of Confucianism. Despite this specific disagreement, they concur with the view that Ch’oe’s philosophy is in pursuit of modernity within the limit of existing Confucianism.

Considering his view as a unified perspective of traditional Confucianism and western science, it is necessary to explore the way in which the two are connected in his overarching philosophical system. Given that Ch’oe defines his philosophy as kihak, and regards this as first philosophy comprehending Confucianism, Buddhism, and western science, it is important to explore this relation. In this paper, in light of this consideration, I will firstly examine this respect. Secondly, I shall explore the content of western science which Ch’oe adopted, his critical engagement with it, and its relation to his own philosophical stance. It is noteworthy in this respect that Ch’oe accepted western science neither uncritically nor without reserve. It was accepted on the basis of his criteria and within his framework. Finally, I shall go on further to examine in what way the concept of orthodoxy li-chi [理-氣] was transformed into Ch’oe’s philosophy.

2. Theory of Chi

Ch’oe criticized Neo-Confucianism, Taoism, and Buddhism which together forms the contemporary scientific paradigm of his time. He also went a step further in his criticism of western Roman Catholicism on the ground that it was outmoded. Once this criticism was in place, he was able to claim for kihak the position of a science in harmony with new science and technological developments. Ch’oe considered his era as an age of enlightenment in which “the character of science had altered, allowing the general principle of things to be illuminated.”4 In this respect, he argued that those concepts which traditional Confucianism had explored “should be interpreted in terms of ineffably subtle chi”.5 In doing this, not only would such

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4 Ch’oe Han-gi, ‘Myŏngnamnu Su-rok’ in Ch’oe Han-gi’s Complete Works v 1, p 2 (From next footnote, the name, Ch’oe Han-gi will be omitted)
analysis proceed on a proper footing, but in addition the telos of contemporary science could be preserved intact and accommodated satisfactorily into his system. For Ch’oe, a science that met the requirements of the times would necessarily involve a greater sense of objectivity and universality. He looked for such a ground in the new concept of chi, grounded in turn by kihak. The concept of chi comprehended not only the existing key concepts (ch‘ŏn, che, tao, sŏng, shum, shun, chi, yin-yang) but also encompassed and provided a conceptual foundation for the incoming western technology. His claim was that “customs and an established rule is not likely to alter”, so that the morality of confucianism could not be easily discarded. Although he accepted this fact, he thought that we ought not to adhere to traditional science on the ground that “the culture and custom of a country is different from all ages, and natural science employing mathematical terms—which quantify natural phenomena in measurable arithmetic terms—has been developed time after time.” Since he thought that true science “should be helpful for actual affairs”, he maintained that scholars should not merely consider their task as elucidation of morality. It was emphasized by Ch’oe that a condition of the acceptance of an epoch-making science would be that “the ancient things could be renounced but the present one could not be” And, given Ch’oe’s understanding of the newly broad scope of science, he could assert that all ‘learnings’ might literally be science.”

In light of this consideration, given that Ch’oe regarded Confucianism as the science of medieval times, with an impoverished sense of universality and objectivity, he suggested further that kihak was the new science, in harmony with the present. kihak at once comprehends all traditional sciences and is defined in terms of the new technology: predictive science which seek to quantify natural phenomena in measurable arithmetic terms, for example, the classificatory science of things, and instrumental, tactical science. Ch’oe claimed that this kihak was neither a modern innovation nor of his contrivance, but rather was the outcome of human history seen as a gradual accumulation of knowledge

It was held that kihak could not only explain natural phenomena but also human consciousness and morality. According to Ch’oe, the movement of chi could be classified under taegi-wunhwaw, which is a scientific knowledge of natural phenomena, t‘ongmin-wunhwaw, and inshin-wunhwaw, which pertains to the human realm.

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5 Myŏngnamnu Su-rok, p 1
6 Ch’oech’ŏk-lok, v 1, p 25
7 Injŏng, v 2, ‘Samoo’
8 Kihak v 1, ‘Preface’
While their range of application differ, the principles are one in their ultimate reducibility to the movement of monistic chi. We might say that this parallels the unity of contemporary sciences, in the sense that the single principle of natural science is taken to comprehend both social science and ethics.

Although it is doubtful whether or not t'ongmun-wunhwaa, the principle of politics and morality, can be explained in terms of taegi-wunhwaa, the principle of natural world, it does seem to me that Ch'oe's attempt is a landmark. Ch'oe clearly anticipates modern ways of thinking in his attempt to illuminate the principle of human life in terms of physics, within the framework of kihak. Traditional Confucianism, on the other hand, had explored the movement of the universe solely in terms of human value.

3. Western Science and Kihak

We can not be certain how Ch'oe became aware of the precision and usefulness of western science. But considering his lament for national isolation and the conservative position of Chosön; and, further, his emphasis on the continual necessity of opening up intercourse with foreign countries, it seems to me that the crucial event accounting for his concern with western science was commercial interchange between Korea and China. This was unlike other scholars who had been to China as missionaries.

Ch'oe was neither scientist nor technologist, he saw himself instead as a Confucianist. Moreover, Ch'oe never had the opportunity to apply his knowledge, so that his acceptance of western science remained wholly textual and introductory. Although Ch'oe's attitude to science would become similar to that of Yi Ik a former scholar of silla, there were differences. The science which Yi Ik accepted represented medieval western science. Ch'oe's works, in contrast, such as Sōnggi-wunhwaa and Tamch'ŏn, which is transcription of Shinn'gi-ch'ŏnhŏm, and Chŏnch'esinron, represented the high scientism of the nineteenth century. Furthermore, Ch'oe argued for the unification of traditional philosophy and western science in terms of the framework of kihak. Conversely, other scholars (including Yi Ik) placed emphasis on a perceived dichotomy between science and philosophy. Such philosophers insisted on the acceptance of technology, but at the same time sought to preserve the confucian world-view. It is plausible to suggest that Ch'oe was a forerunner, whose position inaugurated the modern age. In particular, the rapidity and precision of his understanding of western science, and his critical accommodation of western thinking within his philosophy, are noteworthy.
Ch’oe eliminated elements in disharmony with kihak, and provided contents lacking. The former elements concerned Christian theology, the latter were scientific facts interpreted in terms of his kihak. He explained the phenomena of a heavenly body within the framework of making chi. Meteorological phenomena such as rotation, revolution, ebb and flow could be explained by a wheel of chi and atmospheric action by a whirlpool during the making of chi.

Depending on the degree of clarity, Ch’oe classified chi as three steps; firstly, he explained the action of perception by shin’gi, and meteorological phenomena by the notion of mong-gi, finally, the quality of matter by kyiI. This attitude was consistent from Kich’ük-ch’eüi to Chigujŏnŭi (with reference to Konyŏdo-sŏl written by Verbiest and Ch’ŏmnun-ryak written by Emmanuel Diaz), and Wuhnwa-chŏkhŏn — taken by data of Kongch’e-kyŏkch’i. But it is unclear whether he accepted Descartes’ vortex theory while he was unaware of Newton’s law of gravitation, or the application of traditional chi theory to western science. Sŏnggi-wuhnwa, published in 1867 on the basis of Tanch’ŏn translated by the missionary Alexander Wylie, employs the concept of “gravitational perturbation” Moreover, in Shin’gi-ch’ŏnhŏn, published in 1866, he explained solidity and softness by strong and weak propensity of attraction in the kyiI. Whilst it is doubtful to suggest that the concept of gravitational perturbation was equivalent to Newton’s universal gravitation, there are similarities. I would argue that, on the one hand, Ch’oe employed perturbation as proof for his philosophy of the movement of chi; whilst on the other hand, he underscored minor differences between the theory of perturbation and the movement of atmosphere in kihak, after understanding the relation between the theories of perturbation and of Supreme Being. Moreover, he emphasized that existing study of the place and orbit of stars did not fit theory, so that instead we must understand the course of making chi and interaction of the wheel of chi that lay siege to the stars. From one perspective, we can take this claims as a position which retains the existing theory of the whirlpool. From another perspective, we can unpack it as being in accordance with traditional chi theory. It should be noted that what he valued above all in western scientific knowledge was that which could be of use in the explanation of kihak. We can see this position in his Shin’gi-ch’ŏnhŏn published by editing western medical books: Chŏnch’esun-rŏn, Sŏnyak-rŏn, Naegwa-sinsŏl written by Benjamin Hobson. He was critical of Chinese medical science which illuminated the phenomena of living things by reference to theory of In-Yang. For Ch’oe, that science lacked exact anatomical knowledge; it could never reveal the cause of illness, and was thus limited in providing a cure. In contrast, he thought that the empirical methodology of western medical science had exemplary effects for
inquiry into diagnosis and cure. However, whilst Ch’oe acknowledged the merits of western medical science, he also perceived defects. He was critical not only of the attribution of the human bodies and human perceptions to God, but also that method which treated medical cases according to a sharp separation of internal and external. For Ch’oe, that method arose from ignorance of the fact that ch’i of one body is associated with both external and internal. The method could therefore be improved it by connecting internal and external.  

On the other hand, in Ch’oe’s consideration of the problem of a thinking organ in ‘the explanatory notes’ of Shin’gi-ch’ŏnhŏm, he acknowledges that the brain is in charge of the area of thinking termed “the inferring and fathoming, and adaptability”, and underscores the usefulness of the notion that Mind is a fundamental source of perception, by which brain activity can be operated. He said that this mind, of course, “is not heart as the internal organs, but is the mind as the action of shin’gi, and we can say that it is similar to the center of gravity.” This theory of mind is similar to that found in the traditional theory of mind, and conforms with his kihak, although I can’t sure exactly whether or not he had an influence on Cartesian dualism in the mind-body problem. Considering these examples, we can see that the introduction to new technology was a key focus in his acceptance of western science, along with the separation of science from theology, which had been mixed in those books written by missionaries. Consequently, Ch’oe introduced and interpreted western science within the framework of chi-hsueh, instead of acceptance of theology. It should be noted that such a concern was caused by the influence of western science, appropriately adapted to suit the system of chi-hsueh.

4. Ch’oe Han-gi’s Critics of Neo-Confucianism

Ch’oe’s criticism of Neo-Confucianism is as follows: first, li (Principle, Law) does not merely remain in formless. It is a secondary being or epiphenomena which is not a substance in that it is formed by logic or condition of chi. Hence Ch’oe claimed that in order to understand li, it is first necessary to understand chi as substance, so that we can see the true li rather than formless and immaterial li.

Central to his criticism of Confucianism was the fact that the particular content of li is a human value. Further, that content is shapeless, uninvented and incorporeal and ideal being, and the origin of being. Lastly, he claimed that perception of li by

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9 Shin’gi-ch’ŏnhŏm, ‘Preface’
10. Shin’gi-ch’ŏnhŏm, p 9
chi make us have a knowledge of li with form and place, so that we can see universal and objective li not mysterious and metaphysical li.

He believed that if we classified the movement of chi into steps, then that movement might be divided in three: taegi-wunhwa, t'ongmin-wunhwa, ilsin-wunhwa. It is certain that the virtues of Confucianism were not acknowledged as the ultimate principle in his kihak, as metaphysics of morals in Confucianism, because they correspond to the second, i.e. taegi-wunhwa, t'ongmin-wunhwa step, although they did not exclude Tao of In-Ül(Way of Benevolence and Justice) from the nature of Chi. In addition, considering the relation between chi and li, he thought the li of prevailing as law of motion of chi was distinguished from li of inferring and fathoming as understanding of human being. To borrow a term form Ch'oe Han-gi, “The li which was mentioned by all the books including li in science of li is merely li of presumption. This assertion implies that li of Confucianism is nothing but the subjective knowledge of the human being.” Moreover, Ch'oe devaluated the li of Confucianism. I order to establish the true li, he stipulated the following requirements: Firstly, it must conform to the li of taegi-wunhwa which is a higher step. Secondly, it must correspond with the prevailing li i.e. the law of motion chi.

Ch'oe classified the movement of chi from the individual as the subject of perception to ilsin-wunhwa, t'ongmin-wunhwa and taegi-wunhwa. Thus, the li as law of motion could be characterized as an analysis of li of ilsin-wunhwa, li of t'ongmin-wunhwa (norm, moral of human being), and li of taegi-wunhwa (natural law, Tao of heaven). This analysis shows that as individuals abide by universal norms of human being so social norms which perceived as li of t'ongmin-wunhwa must be subjected to the more comprehensive li of taegi-wunhwa. In addition to this analysis, he expounded the relation between the ability of human understanding, and li of presumption. According to him, the former, on the one hand, is equivalent to the ability of human understanding which understand the prevailing li, the internal law of chi; on the other hand, the latter is same as the contents that human understanding could deliberate the thing before its event, or necessity, with the experience of the nature and human society.

In this context, Ch'oe believed that li, T'au-ch'i, sadan (the Four Beginnings) in Confucianism, were only Nomos i.e. li of presumption. He denied the premise of Confucianism which the Tao of human beings is same as the ch'ondo(heaven's law) Additionally, he devaluated the moral value of Confucianism in philosophy by

11 Kihak, p.2.
12 Kach'ül-cheü, p 9
claiming that moral principles, absolute truths in Confucianism, might be nothing but a presumption; a relative truth. Although he questioned the moral value in Confucianism, he persisted in adhering to a traditional Confucian ethics which could provide an answer as to content of true human value conforming to *taegi-wunhwaw*, corresponding to prevailing *li* of *t'ongmin-wunhwaw*. Thus, we can see that there are inconsistencies between the *li* of *taegi-wunhwaw*, which gave a guarantee of objective by quantity and verification, and pre-modern morality which concentrated on subjective personality and volition. We can see this fact earlier than kaehwasasang (thought of enlightenment in late Chosön). It is in this sense that Ch’oe emphasized the importance of custom and etiquette because it is not likely that we can change them, and gave them a more or less absolute status. From this point of view, we can take his thought as not entirely free from medieval thinking. And yet he provides a clue which point towards a modern ethics in which the principle of things and affairs might become consistent.13

5. Reformation of the Concept of Chi

The concept of *chi* at the core of Ch’oe’s philosophy both adhered to the traditional concept and went beyond it. In so far as his theory of *chi* implied that all things that exist consist of *chi* and that the universe is filled with *chi*, it does not differ from the Confucian theory of *chi*. Ch’oe, however, rejected some elements of traditional *chi* theory, by which might define the characteristic of *chi*.

The first point to be noted is as follows: whilst former *chi* Theorists divided *chi* into *chi* of reality and *chi* of phenomenon, and stressed the former as incorporeal (without shape), vacant, purity, Ch’oe emphasized that the *chi* itself in universe, in the basic quality, emerges from the movement of *chi* of having shape and extension in space and time, and it is not vacant or nothing, but is a being. He illustrated this by various experiment to demonstrate that there is form and quality in *chi*. The examples which were given were evidence of the existence of air. Depending on these examples, however, it seems to me that the *chi* is basically the same as the air, even though he distinguished the two. On the one hand, through the concept of *mong-gi* (all-covering *chi*) over which *yugi* (the *chi* wandering the earth) become entangled, Ch’oe explained the refraction of the moon and the earth. On the other hand, the change of morning and night, and orbit of star were explained by the phenomena of whirlpool of *chi*. From this it can be seen that ‘all-covering *chi*’ is the

13 Shin’gi-t’ong, v 3, ‘Sŏnakhhae’
same as chi, albeit with some difference in degree of clarity. The example in which the atmosphere was expressed by the notions of ‘all-covering chi’ emerges from the book written by Hong Tae-yong and Chŏng Yak-yong. Hong Tae-yong rejected the traditional theory of the universe. theory of five Elements and argued in favor of theory of Four Origination which may be represented as follow: chi (air), Sun (fire), soil and water. Ch’oe, however, did not accept the theory of Four Origination on the grounds that the world consisted of a greater number of elements. Attributing ineffably subtle chi to the action of the understanding, ‘all-covering chi’ to the circulation of heaven, and kyl to the quality of matter, he desired a consistent explanation of the phenomena, and a unification of knowledge and law, through the unification into chi (神氣) - ‘all-covering chi (夢氣)’ - ‘atmospheric chi (大氣)’, ‘wandering and circulating chi (遊氣)’ - kyl [matter]. Ch’oe devised proper names for the various functions of chi: ch’ŏn, che, tao, myŏng, sŏng, shim, shun, kwi, in-yang, tongjŏng, with the intention that each might embrace traditional Confucian concepts, and at the same time he attempted to establish the basis of western scientific thought and empirical epistemology through the concept of chi. Ch’oe searched for the fullness and identity of being(matter) through the concept of chi. Indeed, whilst the existing philosophy of chi expounded distinction between the original monistic chi and individual phenomena, and argued the way in which the trait of original monistic chi was realized in phenomena, Ch’oe held that chi is a mass of lively, moving matter, and that the nature of the ‘chi of heaven and earth’, whatever is shape it might have, does not change. From this, we can see the metaphysical premise of chi philosophy, in which it can be assumed that we may understand the essence of the ‘chi of heaven and earth’ by Thing-the phenomenal manifestations of agglomerated chi in specific shapes and compositions of agglomerated chi, and the nature of the world can be inferred from the objective fact of the empirical world. From this perspective, he claimed that the essence of the ‘chi of heaven and earth’, as essential body (matter), is motion itself. He did not think that the chi was the same as a lively, having goal, and oriented entity, even if he defined chi as lively thing. It seems to me, rather, that he intended as the essence of chi that, as the essential body, it is not separated into time or extension, but consists of continuously moving phenomena. By matching the two in his definitions of the qualities of chi as ‘lively, in motion, regularly operating and in transformation’, and of the aspect of chi as cold, hot, dry and wet, he hinted that that quality of chi able to be perceived

14 Chungjŏnya, v 1, ‘Chilyo’chaseo’
15 Kihak, p 32
empirically and the nature of the chi of heaven and earth, are inside and outside. It is worth noting that cold, hot, dry, and wet which Ch’oe regarded as aspect of chi is the same as Aristotle’s theory of the four Elements. From this perspective, a close relation emerges between Ch’oe’s acceptance of western science and his explanation of the movement and change of chi, not by reference to the traditional theory of five Elements, but rather by defining the trait of chi as ‘lively, in motion, and transforming.’

Ch’oe referred the chi ‘lively, in motion, regularly operating and transforming’ as shin’gi, as the chi of heaven and earth does, so shin’gi does not exist separate from the empirical world. It represents one aspect or character of chi. He regarded shin’gi, as a mode of chi, possessing shape and trace, capable of knowledge, movement and change, and not something unknown. It is for this reason that Ch’oe claims we can see the ‘lively’, in motion, regularly operating and transforming by the ‘ineffably subtle chi manifested in physical objects’ given by human being so that we can assume the real essence of the shin’gi of heaven and earth, and he search for the reason in universality of shin’gi. We might suggest in this respect that shin’gi is not an act of perception itself, but the quality of chi by which we are able to perceive, which at the same time is the object of perception.

After all, we can see that his chi of heaven and earth or shin’gi is not separate from the chi which subsists in the empirical world, but is instead the concept which guarantees the universality of empirical knowledge of phenomena. Furthermore, it can be seen from these concerns that he was engaged in developing a metaphysics which contained the meaning of the origin of material being in general.

It was Ch’oe’s concern to emphasize that all beings exists on the basis of the university of shin’gi, not to illustrate how human beings, and all other things, emerge from the monistic chi. The point worth noting here is that chi which consist of being between men and men, and men and things, is not qualitatively different in respect of its ‘clarity, turbidity, purity and impurity’. As it were, the quality and the function of individual things is only differentiated by the genetic character of quality which is existing chi, and the shin’gi by which every form and natural characteristics could be individuated were the same. From this perspective it is possible for us to apprehend the reality of the world through empirical knowledge of corporeal individual phenomena. Therefore, Ch’oe’s understanding of reality is not of a descending system moving downwards from the apprehension of metaphysical monistic chi; rather it is an ascending system which moves from empirical knowledge to abstract knowledge to abstract knowledge. From this we should note that Ch’oe intended upon the objectivity and universality of empirical knowledge of
individual entities.\textsuperscript{16}

Ch’oe defined the ‘substance’ of the ‘chi of heaven and earth as the ‘living, moving, regularly operating and transforming’. Consequently, it seems to me that these four qualities i.e., cold, heat, dry, wet, and phenomena as ‘cold, heat, dry, wet, determined the basic quality of all beings. Ch’oe thought that these four qualities could be measured with instruments, and hence he might establish objective knowledge. And he claimed a thermometer and a hygrometer could measure the ‘cold, hot, dry and wet’ qualities objectively, aiding the picture.\textsuperscript{17} It can be seen that Ch’oe conceived of the universality of empirical knowledge in terms of the concept of chi, and he suggested how we might attain objective knowledge by making this quantitative. So number is the most important means of understanding chi and all beings, from the chi of heaven and earth to individual phenomena become known as objective and universal form by the number.

In particular, we can see what his kihak attempted. According to Ch’oe, the being of shin’gi and the law of movement find harmony with human inferring and measuring by the extension of sense or the instrument of the fixed quantity. That is to say, the li of making movement and prevailing comes to conform to human opinion by the universality of the number. From this point of view, Ch’oe thought that number is nearly equivalent to law of movement of chi. It seems to me that he regarded number as the essential quality of chi, since he understood number as the best expression of chi if chi is a matter (thing), and it is possible to express all of the movements in number.

Considering his emphasis on the universality of the chi as manifest in physical objects and his postulate of a close connection between number and chi, it becomes clear that his chi concept was absolutely different in meaning and aim from chi concept which formed the reason of individuation in traditional Confucianism, and the explanatory concept for the moral hierarchy caused by ‘clearness, turbidity, purity and impurity.’ In particular, we can take his notion that the university of chi can be reduced into that of the number as embryonic of modern thought.

6. Conclusion

The concept of chi, corresponding with his quest for universality may be considered as deriving in part from earlier concepts belonging to previous theories of chi,

\textsuperscript{16} Shin’gi-t’ong, v 1, ‘Hyŏngjil’

\textsuperscript{17} Ch’uch’ŏk-rok, v 1, ‘Kibon’
whilst at the same time serving as a mediating concept for the acceptance of western scientific thought. It is at this point that Ch’oe’s notion of chi assumes new meaning. Whereas earlier philosophers of chi concentrated on explaining a standard for the human way (that is, ethical norms) and the ethical hierarchy by contrasting the ‘void, clarity, and inactivity of’ the Great Void as the ‘substance’ of chi with the ‘actuality, motion, and turbidity’ of the hyŏngjil, and aimed to overcome the theory of nihility and annihilation in Buddhism by theory of distraction in the monastic chi, his chi philosophy aimed at ensuring empirical epistemology, and the compatibility of chi with new technologies. It is therefore natural that the notion of chi should diverge from the formal concept.

For Ch’oe, chi is first of all perceived sensory through its form and shape (extension in time and space), taste, sound, and feel. Among the various types of chi, some, like fire or the sky, are without a specific form and shape, and others only possess the qualities of being ‘cold, hot, dry, and wet’ All are perceived equally through the sensory organs. According to Ch’oe, all these workings of chi may be summarized as ‘lively, moving, regularly operating and transforming’, which manifest themselves phenomenally in terms of the Four originating qualities of ‘cold, hot, dry, and wet’. Ch’oe’s philosophy of chi is to be distinguished from previous attempts to build up a philosophical system by suggesting the universal concept of chi, in that he was in pursuit of the scientific knowledge of natural phenomena and a fundamental universal principle that can be applied both to the natural and the human realms.

Ch’oe regarded the connotations of unlimitedness, indeterminacy, continuity in time and space and multiplicity of meaning contained in the Confucian concept of chi, along with the value-laden implications of ‘clearity, turbidity, purity and impurity’ of chi, and the attempt to explain phenomena in the natural and the human realm by subscribing to the scheme of the mysterious creative action of the Yin-Yang and the Five Elements, as being incompatible with the scientific world-view. Therefore, while adopting aspects of this notion of chi as his own, he linked the idea of arithmetic quantifiability to it, in order to seek compatibility with scientific knowledge. Ch’oe first rejected the formulations such as ‘void is chi’ or ‘monistic chi without shape or form’ and argued that all chi are characterized by having extensions into space time, since they have specifically manifested shapes and traces in phenomena. Ch’oe also argued that since chi possesses the Four Originating Qualities of ‘cold, hot, dry, and wet’, it can be represented in the idea of arithmetic quantifiability in terms of instrumental, practical science. Since mathematical terms are able to demonstrate the movements and changes of chi in an
objective and universal manner, natural sciences employing these mathematical
terms — which quantify natural phenomena in measurable arithmetical terms —
come to be regarded as the academic discipline most able to reply the true of exis-
tence. Ch’oe also claimed that the laws governing the movement and metamorpho-
sis of chi is mathematical in nature. To conclude it can be seen that his system of
thought represents efforts to move beyond the neo-Confucian moral value — cen-
tered methodology reliant on subjective intuition on the road to modern ways of
thing in Korea, even though Ch’oe seemed in some ways to be overly enthusiastic
in embracing western sciences.
(translated by Yang, Sunny)

GLOSSARY

Ch’oe Han-gi 崔漢綺

ch’ón 天

ch’ón-do 天道

Ch’uch’ŭik-lok 推則錄

che 靡

chi 氣

Chŏnch’ŏsin-ron 全體新論

Ch’ŏnmun-ryak 天文略

Chŏnch’ŏsin-ron 全體新論

Chŏng Yak-yong 丁若鏞

Chigu-jŏnyo 地球典要

Hong Tae-yong 洪大容

hyŏnggil 形質

in-yang 陰陽

insin-wunhwa 人神運化

kaehwa-sasang 開化思想

kijil 氣質

Kich’ŭik-ch’ëiŭ 氣測體義

kikak 氣學

Kihak 氣學

Kongch’ë-kyŏckchi’i 空樸格致

Konyŏdo-sŏl 坤興圖說

kwŏ 鬼

li 理

mong-gi 蒙氣

myŏng 命

Myŏngnamnu Su-rok 明南樓隨錄

Naegwa-sinsŏl 內科新說

sadan 四端

Sŏn’iak-ron 西醫略論

shim 心

shin 身

shin 神

shin’gi 神氣

silhak 實學

Shin’gi-t’ong 神氣通

Shin’gi-chŏnhŏm 身機踐騐

sŏng 性

Sŏnggi-wunhwa 星氣運化

taegi-wunhwa 大氣運化

t’ai-chi 太極

Tamch’ŏn 談天

tao 道

té 德

tongjŏng 動靜

tongdosa-gi-ron 東道西器論

t’ongmin-wunhwa 統民運化

Wunhwa-ch’ŏkhŏm 運化測驗
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<td>Yügí</td>
</tr>
<tr>
<td>李漸</td>
<td>遊気</td>
</tr>
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