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KNOWLEDGE AND KNOWING IN NEO-CONFUCIANISM

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Knowledge has a fundamental role in Neo-Confucian philosophy, and "knowing" (*zhi* 知) is a mandatory procedure via which one reaches the ultimate goal of Neo-Confucianism, the perfection of moral cultivation. A Neo-Confucian exercises her moral agency via knowing with the aspiration of attaining the Way (*dao* 道), the state of constant and spontaneous sagacity, and one who has realized the Way is inevitably a knowledgeable person.

To be sure, terms like "knowledge" and "knowing" have highly specific meanings as they are integral to the elaborate enterprise of Neo-Confucian metaphysics. To understand these concepts correctly, a modern reader should steer clear of some conventional claims of Western epistemologies. Knowledge in Neo-Confucianism is closely tied to the goal of achieving moral excellence, the ultimate reference point by which the meaning and value of knowledge are defined. As a result, many questions central to Western epistemologies are at best marginal in Neo-Confucian considerations, such as the essence of knowledge, the difference between belief and opinion, the possibility of truth and its attendant concepts such as justification and evidence. As I will demonstrate in this chapter, the Neo-Confucian theory asks highly distinctive questions regarding the nature of knowledge and operates with disparate epistemic assumptions.

Types of Knowing

Knowing in Neo-Confucian terms is a complex act encompassing multiple meanings. Most generally speaking, "knowing" refers to a kind of cognitive-conative awareness. This awareness could be straight perception, which relies on the workings of sensory faculties and provides an elementary understanding of the world. Neo-Confucian thinkers identified various limitations of perception, particularly that it has no access to the deep facts of the world. Sometimes calling it "knowing from hearing and seeing" (*wen jian zhi zhi* 聞見之知), Neo-Confucians placed perception at the bottom rank of knowing because it makes the least contribution to moral cultivation. Although many thinkers believed that sensory knowing is a necessary step preceding more advanced types of knowing, the role perception plays is auxiliary and instrumental at best (Zuo 2018: 15–16).

Above sensory perception Neo-Confucians designated multiple elevated forms of knowing. While these ways of knowing do not always fit into one coherent hierarchy, they share a common reason for having greater value—that they contribute to cultivating moral virtues

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more directly or more significantly. Often appearing in a binary with sensory knowing is the so-called knowing from virtuous nature (*de xing zhi zhi* 德性之知), a higher type of cognitive-conative awareness that guides one's self-cultivation. To know from virtuous nature is to discern the deep patterns of things (including humans) across the universe by way of using one's heart-mind (*xin* 心) (Zuo 2018: 15). This type of discernment may emerge from an initial use of perception but does not depend on the senses for further actualization, and it should be effortless in the final form, involving little mental exertion of any kind. The consummation of "knowing from virtuous nature" is equivalent to attaining the Way.

Another higher form of knowing is the so-called genuine knowledge (*zhen zhi* 真知), which is sometimes also defined as having "depth" (*shen* 深) or being "completed" (*zhi* 至) (Cheng and Cheng 2004: 305). Neo-Confucians valued this type of knowledge because it sparks spontaneous moral actions. Genuine knowledge is presumably superior to "ordinary knowledge" (*chang zhi* 常知), i.e., knowledge *about* something and within everyone's reach (Ivanhoe 2000: 62); sensory perception, for example, can be one kind of ordinary knowledge. Genuine knowledge is grasped by one's heart-mind instead of by the senses, and it disposes one to act in accord with this knowledge.

Cheng Yi 程頤 (1033–1107) discussed the difference between ordinary and genuine knowledge via an example of a farmer and a tiger. Residents in a village are scared of a tiger with an understanding that the animal may hurt people, a knowledge defined by Cheng as being ordinary. One farmer, who has once been mauled by a tiger, remains composed amid the agitated crowd; this person, as Cheng argued, has genuine knowledge of the whole situation (Cheng and Cheng 2004: 16). Taken at its face value, the farmer's knowledge is genuine because he has direct personal experience of being hurt by a tiger, but Cheng did not mean to promote the significance of sensory experience. Instead, he saw value in the farmer's readiness to respond to a potential tiger attack, a spontaneous disposition he has cultivated since the previous incident. This motivational immediacy demonstrates the genuineness of the farmer's knowledge (Huang 2014: 114).

General Characteristics and Metaphysical Foundations of Knowing

As readers may have noticed, the ways in which Neo-Confucians define and categorize knowledge evince some overall characteristics vastly different from those of Western epistemologies. First, the typology of Neo-Confucian knowledge cuts through many conventional Western epistemic categories. What the Neo-Confucians acquire through "knowing" ranges from a modest "knowing-of" to a deep "understanding" and can occur as a lasting state of familiarity or a momentary recognition/realization. When one sets out to know, she does not distinguish between propositional knowledge (knowing-that) and skillful competence (knowing-how), nor does she separate theoretical knowledge from practical knowledge, although she may value a skilled, embodied action more than an axiomatic analysis. In addition, a Neo-Confucian consistently employs cognition and conation in unison, hence a confluence of reason and affect in her heart-mind. It is true that Neo-Confucians identify moral cultivation as the ultimate goal, but they do not, as a result, restrict their learning objective to a narrowly defined moral knowledge (i.e., effective ethical knowledge). Neo-Confucian sagehood means "interacting well with the world in every way," and as a result, the pursuit of interpersonal competence would come hand-in-hand with a propositional understanding of things, humans, and the universe (Angle and Tiwald 2017: 114).

Second, the various modes of knowing often come together as parts of one coherent process rather than occurring as insulated episodes. The pursuit of the Way via knowing is a holistic

stream of experience that combines intending, perceiving, feeling, accessing, and acting. To grasp this composite nature, we should be careful not to mistake differentiation for partition. For example, "knowing from hearing and seeing" often precedes and prepares "knowing from virtuous nature" in seamless continuity, and an ideal type of knowing would naturally flow into virtuous actions. In light of the two characteristics above, a Neo-Confucian par excellence has to be knowledgeable not in the sense of being erudite in arts and sciences, but as someone with a broader command of cognitive, affective, and practical competences all directed toward achieving spontaneous sagacity.

Last but certainly not least, Neo-Confucians practice knowing in a holistic, interdependent cosmos where there is no subject-object demarcation. As thinkers such as Cheng Hao 程顥 (1032–1085) and Zhu Xi 朱熹 (1130–1200) claimed, a superior Neo-Confucian should form "one body" (*yiti* 一體) with the things she intends to know (Cheng and Cheng 2004: 15; Zhu 1987: 2). This means that knowing would eventually lead one to form unity with a greater whole, and knowing would be efficacious only when the practitioner is able to subdue self-centricity to a globalist point of view (Allen 2015: 82). Although a practical internal-external distinction is always in place due to a conventional awareness of the self, a Neo-Confucian constantly envisions epistemic excellence on the basis of overcoming the gap and keeping the self immersed in global interconnectivity.

To understand these characteristics, particularly the last point, readers should keep in mind that the Neo-Confucian conceptions of knowledge are grounded in a highly specific metaphysical scheme. To start with, *tian* 天 (Heaven, or less literarily, the cosmos) is the source of the order of everything, including humans. That is, the values and orientations of human society are part of the deep structures of the universe. The overall cosmic order remains accessible and relevant to every human, because Heaven endows her with "nature" (*xing* 性). In its original and pure state, human nature contains perfect order and goodness, yet these qualities are often adulterated by the contingencies arising during its materialization in individuals. A primary task of moral cultivation, therefore, is for one to "recover" the original state of nature (Ivanhoe 2000: 46). The human capacity and agency in conducting such a "recovery" resides in the heart-mind. Returning to the issue of knowledge, the process by which the heart-mind restores the original state of nature is via knowing. The connection between nature and knowing explains why a major type of knowing is designated as "knowing from virtuous nature." As the metaphysical scheme stipulates, one's knowing is constantly oriented toward understanding goodness in human nature, which is further embedded in the deep structures of the cosmos. The ultimate success of a knower is to fully immerse herself in the cosmic order and act accordingly with ease and harmony. This is how and why one should remain in unity with the universe while conducting knowing. Any attempt to separate the knower from the world, such as in a subject-object binary, is to cloud her heart-mind with self-consciousness and distract her from discerning the deep order.

The three general characteristics and their metaphysical grounds constitute essential background for an understanding of the two specific Neo-Confucian themes regarding knowing, which I introduce in the sections below.

Investigating Things and Extending Knowledge

"Investigating things and extending knowledge" (*gewu zhizhi* 格物致知) is arguably the best known Neo-Confucian precept regarding knowing and knowledge. Originally appearing in the ancient Confucian classic *Great Learning* (*Daxue* 大學), the phrase was reappropriated by Cheng Yi and Zhu Xi to designate a key activity of moral learning, namely, that one

should develop deep understandings of the myriad things in the world and thereby extend her knowledge for the purpose of consummating self-cultivation. As scholars generally agree, medieval Neo-Confucians coined the slogan to refute contemporaneous Buddhist philosophers, who deemed things in the world devoid of intrinsic reality. In contrast, thinkers like Zhu Xi believed that things are real and worth "investigating," and that a Way-seeker should learn through an "incremental, gradual process" grounded in investigating things instead of through a "sudden moment of awareness" (Makeham 2018: 9).

Most scholars agree that "investigating things" and "extending knowledge" are two interlocked aspects of the same process, and that the investigation of things leads to one's possession of extended knowledge (Chen 2008: 290). As Zhu Xi puts it, "by investigating things one can extend his knowledge, just as one becomes full after eating" (Zhu 2001: 2030).

But what things is one supposed to investigate, and how does the knowledge she acquires lead to moral sagacity? A breakdown of the procedure into its key concepts is in order. First, "things" (*wu* 物) refers to all objects and processes in the world which collectively stand for the entirety of the phenomenal universe (Zuo 2018: 40). While one is certainly acquainted with things via the senses, she is supposed to go beyond perception and investigate the coherences (*li* 理) of things. In other words, the knowledge one seeks is that of coherences.

Conventionally translated as "principles," "*li*" refers to the valuable and intelligible ways that things fit together, a meaning well captured by the English word "coherence" (Peterson 1986; Ziporyn 2008; Angle 2009). *Li* is a universal, which Neo-Confucians employ to underscore the structure and value of the phenomenal world. Everything has coherence, and the coherences of distinctive things come to unify in one grand coherence, hence Cheng Yi's famous statement "coherence is one and its allotments are different" (*li yi fen shu* 理一分殊, Cheng and Cheng 2004: 609). A coherence always combines the descriptive with the normative, standing for what a thing is and what it ought to be. For example, the four-legged support structure is the coherence of a chair, which describes what a chair looks like and stipulates how it should be built for structural integrity.

Coherence is immanent due to its embeddedness in the materiality of the world (i.e., the *qi* 氣, see this chapter's final section), despite the fact that it goes beyond the sensory properties of things in a weak form of transcendence. That is, a coherence rises above things but remains within the realm of immanence, implicating no division between experiential and otherworldly domains seen in stronger forms of transcendence. The unison of one and many in coherence should not be taken as the result of a deduction from particulars to general principles, a case of strong transcendence presented by some scholars (Chen 2008; Fung 2020). Instead, the unity of coherence comes from the global interconnectivity of things; that is, one coherence connects and harmonizes with another infinitely across the universe, which culminates into the "ultimate" (*zhi* 至), unitary coherence (Angle 2009: 48).

The nature of coherence sheds light on a number of key features of knowing in "investigating things and extending knowledge." First, it is a complex process layered with different modes, including sensory perception and knowing by the heart-mind. While one's investigation of an object/process would almost inevitably start with its sensory properties, she is supposed to reach beyond the surface and discern its value in terms of cohesive interconnectedness in and beyond the thing. As such, the whole process of understanding coherences combines "knowing from hearing and seeing" with "knowing from virtuous nature" while placing a clear focus on the latter.

Second, for some Neo-Confucians such as Zhu Xi, the process of knowing has to involve two realms: the interior of the learner and the exterior where things belong. Zhu identified the divide by acknowledging the separate locations where knowledge and coherence, respectively,

reside, that is, "knowing is the knowing of my heart-mind," hence inside one's self, and "coherence is the coherence of a thing," an entity outside one's physiological containment (Zhu 2001: 2030). But Zhu urged learners to bridge the inner-outer distinction, a goal he termed "to combine the coherence of the inner with that of the outer" (*he neiwai zhi li* 合內外之理) (Zhu 2007: 296). As Zhu reckoned, the knower and things remain in "one body" due to the universality of coherence. As a human approaches a thing, the coherence of the thing would resonate with that of her heart-mind, a process resembling an "ecological transaction" based on co-existence and synergy (Allen 2015: 193). The human and the coherences she observes share the same embeddedness in the globally interconnected universe. If this ontological continuity is disrupted by a credulous acceptance of the inner-outer division, the human would lose the globalist epistemic vision and be restricted to a self-centric point of view.

Third, for Neo-Confucians like Cheng Yi and Zhu Xi, knowing is a cumulative process where the final mastery of the unitary coherence requires piecemeal efforts at comprehending its specific allotments. As Cheng suggests, one should "investigate one thing today and another tomorrow," and as she "accumulates and practices" (*jixi* 積習), she would eventually arrive at the stage of "unimpeded interconnection" (*guantong* 貫通) (Cheng and Cheng 2004: 188). One cannot hope for a sudden enlightenment without having to investigate specific coherences one by one. In light of this principle, Zhu Xi posited two more specific guidelines for a learner: that she should always focus on understanding specific coherences instead of brooding over the unitary, ultimate coherence, and that such efforts should be accomplished in her daily business in a completely non-mysterious way (Zhu 2007: 677–678).

The fourth characteristic of knowing in "investigating things and extending knowledge" is that it brings one to achieve spontaneous sagacity in the consummate stage, i.e., the phase of "unimpeded interconnection." At this point, one has "thoroughly fathomed coherences" (*qiong li* 窮理), and she is therefore able to act appropriately in any and all situations (i.e., to be in constant accord with any and all coherences). The utmost level of discernment leads to, and indeed scaffolds, the development of all virtues in action. Zhu Xi framed these moral achievements with vocabularies pertaining to personal growth, saying that the mastery of coherences enables one to "be sincere in intentions" (*cheng yi* 誠意), to "rectify the heart-mind" (*zheng xin* 正心), and to "cultivate the self" (*xiu shen* 修身) (Zhu 2001: 3493). Ultimately, one who has fathomed coherences would have simultaneously "completed [her] nature" (*jin xing* 盡性), which is the ground of morality (Zhu 2007: 1968). This is because, metaphysically speaking, nature has an internal structure consistent with coherence, and thus investigating coherences is the same as realizing one's nature.

The slogan "investigating things and extending knowledge" reached its peak popularity with Zhu Xi's exposition and continued to prevail in Neo-Confucian thought of later ages, albeit with some visible mutations. Wang Yangming's 王陽明 (1472–1529) rendition of the precept, for example, is meant to differ from that of Zhu Xi. According to Wang, "things" are no longer objects/processes in the world, but thoughts in one's heart-mind, and to "investigate things" is to rectify these thoughts without having to venture into the outside world. The act of knowing thus completely resides in one's own heart-mind, and the reason for his new interpretation, as Wang states, is that "the heart-mind *is* coherence" (*xin ji li* 心即理) (Wang 2017: 25). Wang was not arguing that there are no coherences out there in things; instead, he believed that the heart-mind contains all possible coherences, hence that there is no need to seek supplements in the external world (Shun 2011: 97). In Wang's new theme, knowing becomes an act of rectifying, which removes self-centered desires and maintains one's heart-mind in its original, pure state. To substantiate his claim about one's innate ability to rectify, Wang identified a faculty called "pure knowing" (*liangzhi* 良知), which prunes self-centeredness

and distinguishes right and wrong in every situation (Ivanhoe 2000: 68). This faculty, which everyone possesses, can be understood as a perfect, self-correcting emotion (Angle and Tiwald 2017: 104).

Wang's new interpretation of "investigating things and extending knowledge" further accentuates the unity between the knower, the known, and the cosmos. While Zhu Xi sought to overcome the internal-external divide between one's heart-mind and things, Wang considered such a spatial distinction as irrelevant to the knowing process.

Knowledge and Action in Unity

A second thesis central to the Neo-Confucian conceptualization of knowing is the so-called unity of knowledge and action (*zhi xing he yi* 知行合一), which was coined and made popular by Wang Yangming. This slogan epitomizes the Neo-Confucian belief in mutual dependence between knowing and acting.

A close affinity between good knowledge and wise action has long remained the consensus among Neo-Confucians, including earlier thinkers such as Cheng Yi and Zhu Xi. The definition of "genuine knowledge," as I previously discussed, is premised on whether this knowledge is able to motivate a corresponding action. What Cheng and Zhu conceived between knowledge and action is a close temporal-causal connection. In Zhu Xi's original words, "as for their order, knowing comes first; as for their significance, action comes first" (Zhu 2007: 298). Thus, while action is normatively prior to knowledge, knowing is temporally and causally prior to action (Walker 2019: 515). Wang Yangming disagreed with Zhu's sequence, however, because it implies that a learner would always place knowing first and defer action to a later stage. Wang suggested that one should attend to knowing and acting simultaneously, hence his advocacy of "the unity of knowledge and action." As many agree, Wang argued so with a didactic purpose of urging students to prioritize action in their actual learning practice, and some scholars believe that the difference between Zhu and Wang involves no major metaphysical dispute (Shun 2011: 100; Angle and Tiwald 2017: 131).

The exact meaning of "unity of knowledge and action" as a proposition, nevertheless, has generated much debate among modern philosophers. The first concerns the definition of unity, which can span a spectrum from a weak "conceptual relationship" to a strong "identity." For many modern readers, a weaker reading of unity is more plausible because knowing and acting are conventionally conceived as two different actions, and the possibility of acting is often conditioned by factors beyond knowing, such as willingness. For example, I may know that taking my dog for a long walk every day is good for her well-being, but I fail to do that from time to time. The reason could be that my understanding of the health benefits of exercise is not deep enough, and it could be my lack of motivation, which is dependent on the degree of my devotion to the dog. It could also be sheer laziness despite my possession of sound knowledge and deep affection, and weakness of the will is thus the driving factor. Wang's assertion of unity, if rendered in a strong sense, would barely account for failures to act and their various possible causes, particularly in the ways in which they are framed in Western epistemologies.

As a result, some scholars have suggested interpretations of a weak unity by glossing "acting" as motivation. That is, "*xing*" does not refer to an external action, but rather to a state of being motivated to act, or more forcefully, a wholehearted motivation free of any conflicts of mental states (Angle and Tiwald 2017: 131; Lederman 2022). In these cases, unity is best understood as mutual dependence.

Other scholars, nevertheless, remain committed to a stronger "unity" in the sense of mutual constitution, that is, knowing and acting are to different degrees embedded in each other.

One way of making the case is to finesse the definition of "knowing" and select certain types of knowledge to fit the bill. For example, "knowing" can be an exclusive reference to practical knowledge/knowing-how, in which case knowing and experiencing something are inevitably meshed together (Cua 1982). Or even more specifically, "knowing" is shorthand for "pure knowing," the self-correcting innate faculty, which is an exercise of judgment and thus akin to an act (Yang 2009). Taken together, the various possible sub-categories of knowledge scholars have suggested fall into what can be loosely termed "moral knowledge."

Some other scholars stand by an inclusive understanding of "knowledge" and seek evidence for a form of mutual constitution in the original vocabulary of Neo-Confucian metaphysics. For example, knowing as an act of the heart-mind is not essentially different from an action performed by the body, because both acts belong to the holistic movement of the cosmos, which involves no distinctions between the mental and the physical, the internal and the external (Frisina 1989). Similarly, an activation of thought ("knowing") can be in itself an act, particularly if understood under the framework of "sincerity" (*cheng* 誠), an ideal state where emotion, cognition, and behavior remain in unity (Zheng 2018). This ideal state can be alternatively understood as the original state of the heart-mind, which maintains an unimpeded connection with nature and reflects the cosmic goodness "like a clean, bright mirror" (Ivanhoe 2022: 61; Shun 2011). When the heart-mind responds to any external stimulus in such a state, knowing and acting remain integral components of the response, which is itself a holistic process.

Despite the disparity of interpretation, there is no doubt that Wang Yangming's concoction of "knowledge and action in unity" highlights the Neo-Confucian emphasis on the holistic, procedural nature of knowing, which encompasses intending, construing, and acting all in one stream of experience.

Knowledge of the Material World

Despite the fact that the Neo-Confucian theory of knowledge foregrounds moral cultivation as the ultimate goal of knowing, it by no means rules out an interest in developing a propositional understanding of the material world, the type of knowledge modern readers would normally associate with science or natural philosophy. Historical scholarship in the past decades has proved it a false oversimplification that Neo-Confucianism in premodern China was indifferent to natural knowledge and even actively deterred the development of science and technology (Kim 2000; Zuo 2018). As a matter of fact, numerous premodern thinkers known for their scientific discoveries were followers of Neo-Confucianism. Propositional knowledge of the material world has remained part of the scope of Neo-Confucian "knowing" and has undergone significant developments under the auspices of this philosophical school.

Some Neo-Confucian theses lend clear support for inquiries into the physical world, and "investigating things and extending knowledge" is such an example. In the interpretation by Cheng and Zhu, "things" refers to objects/processes in the entire universe, which encompasses all possible kinds of natural knowledge. It is worth noting that for Neo-Confucians in general, it is not metaphysically viable to partition the cosmos into nature and culture, a dichotomy which would immediately contradict the all-embracing nature of the Way. Zhu Xi encouraged Neo-Confucian students, and indeed led by example, to explore the movement of celestial bodies and the ecology of plants and animals, among other topics (Kim 2000). The patterned phenomena in the natural world constitute a subset of coherences. That is, certain forms of "fitting-together" closely resemble causality in modern understanding, that one thing does something to another thing to produce an effect (Frede 1987: 125). For example, Zhu

recognized a lunar eclipse as the result of the relative motion of the sun and the moon, a *li* congruent with the causal explanation endorsed by modern astronomy (Kim 2000: 153). Neo-Confucian students following the teaching of Cheng and Zhu were thus motivated to study and comprehend the natural world, which contributed to the tremendous development of science, technology, and medicine in premodern China.

The Neo-Confucian sponsorship of natural knowledge should be understood with a caveat, however. Propositional knowing directed at the external world remains secondary in Neo-Confucian thought, a marginal position caused not so much by intentional dismissal, but by implication due to the central status of moral cultivation. One major cause is the peripherality of sensory knowing. Many Neo-Confucian coherences that coincide with modern scientific reasoning fall in the sensory realm; as shown in the example of the lunar eclipse, both cause and effect, i.e., the relative positions of the sun and the moon and the partial/total disappearance of the moon, are phenomena captured by sensory perception. Since Neo-Confucians are supposed to practice higher knowing beyond seeing and hearing, they would not in principle linger in the sensory world for too long. Furthermore, in the consummate stage of knowing, where one discerns in total spontaneity, she is and should be free of mental exertions, including sensory knowing and any kind of analytical thinking. As a result, the Neo-Confucian thinkers who succeeded most in producing natural knowledge, such as Shen Gua 沈括 (1031–1095), were those who embraced sensory knowing with greater enthusiasm and aired skepticism toward certain claims regarding higher knowing, such as the ultimate unity of coherence (Zuo 2018: 213–214).

Another characteristic of construing the material world is generally shared among Neo-Confucians, devotees and skeptics alike. Namely, the cosmos features deep structures, which are not (entirely) susceptible to perception but condition all sensory knowing nevertheless. First and foremost is a belief in a unifying material base of the universe—the *qi*—a multimodal substructure encompassing texture and dynamic, energy and matter. "*Qi*" can be translated as "vital energy," "material force," or left untranslated due to the lack of an adequate equivalent in modern languages. *Qi* provides the foundation for various structures and orders to materialize in the universe, such as the alternative pair *yin* 陰 and *yang* 陽 and the circulative sequence of the Five Phases. While originated in classical Chinese thought, these cosmological construals were well endorsed by Neo-Confucians, who scaffolded their engagement with the material world along these structures. For example, in the relation between the sun and the moon, the sun occupies the *yang*, dominant, and aggressive position, and the moon stands for the *yin*, submissive, and yielding side. In making sense of a lunar eclipse, Neo-Confucians could invoke the relative motion between the two celestial bodies, and it would be perfectly congruent for them to further frame the interaction as an interplay between *yin* and *yang*.

While Neo-Confucians commonly shared the belief in a structured cosmos, they varied vastly in terms of applying these deep structures in understanding the world. Some thinkers, such as Shao Yong 邵雍 (1012–1077), viewed the world as being organized by extraordinarily elaborate numerical structures, e.g., polarities and quadripartite sets in multiplication (Wyatt 2010). These patterns are still supposed to be the configurations of *qi*, just like *yinyang* and the Five Phases, but they appear in more complicated forms, most of which are derived from the *Book of Changes* (*Yijing* 易經). For Shao Yong, an attempt to know an object/process requires an understanding of its placement amid these structures. The unusual numerological outlook of Shao's system has led some to mistake it for an esoteric art, but Shao clearly shared the same epistemic assumption as other Neo-Confucians who sought to comprehend the material world along its structural patterns. Numerical calculations constituted Shao's way to avoid approaching a thing from a self-centric perspective and to develop a globalist epistemic

vision, a common Neo-Confucian aspiration Shao described as "observing things in terms of the things themselves" (*yi wu guan wu* 以物觀物) (Wyatt 2010: 27).

While the focus of this section is on knowledge of the material world, it is worth a side note that the significance of *qi* and deep structures was by no means restricted to natural knowledge. Since the eleventh century, Neo-Confucians had systematically advanced these concepts and incorporated them into their morality-centered metaphysics. Zhang Zai 張載 (1020–1077), for example, is known for expounding the role of *qi* as the universal material base of a cosmos in support of moral transformation (Wang and Ding 2010). When Cheng Yi and Zhu Xi worked on developing the theory of coherence, they identified structures such as *yinyang* and the Five Phases as the most fundamental categories of coherence. These arguments further stimulated the rise of an elaborate *li-qi* metaphysics, which delineates the cosmos as a structural dynamism grounded in unifying materiality.

Conclusion

In sum, knowledge constitutes a critical component of Neo-Confucian philosophy, a system where one cultivates herself via sustained efforts to know toward the goal of attaining constant and spontaneous moral excellence. The Neo-Confucian theory of knowledge, therefore, posits a series of specific themes connecting knowing to moral growth. "Investigating things and extending knowledge" suggests an incremental process in which one develops a deep understanding of global interconnectivity and a resultant competence to interact well with the world in every way. "The unity of knowledge and action" foregrounds the close affinity between knowing and acting, highlighting the capacity of good knowledge to spark moral actions. In addition, knowledge of the material world has also undergone significant developments under Neo-Confucian sponsorship despite the philosophical school's focus on morality. Neo-Confucian metaphysics has consistently supported an inclusive epistemic vision, in which humans and things, nature and culture remain in unity.

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