

Time in Chinese Alchemy

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Introduction

Time plays a major role in the doctrines and practices of both main branches of Chinese alchemy, namely Waidan 外丹, or External Alchemy (documented from the mid-second century BCE), and Neidan 內丹, or Internal Alchemy (documented from the early eighth century CE). Within both branches, time is understood in two main aspects. First, the cosmos is generated by the Dao through a sequence of stages. Time here is meant in a metaphoric sense: as these stages precede the emergence of time, they occur in a state of timelessness. Time as we ordinarily perceive it begins at the conclusion of that sequence. Under this second aspect, time is manifested in the cyclical alternation of Yin and Yang, visible for instance in the succession of daytime and nighttime during the day, of the moon phases during the month, and of the four seasons during the year.

In a significant portion of Waidan, and in virtually the whole of Neidan, both aspects of time are described and represented by classical Daoist concepts and by emblems drawn from the system of Chinese cosmology. As they do in other Daoist traditions (Schipper and Wang 1986), these concepts and emblems represent both “regressive” or “upward” sequences, in which time is traced backwards (*ni* 逆, or “inverting the course”); and “progressive” or “downward” sequences, which reproduce the course of the major time cycles (*shun* 順, or “following the course”). In the first case, the sequence of precosmic stages serves to frame models for the gradual reabsorption of each stage into the previous one by means of the Waidan or the Neidan practices. In the second case, the stages identified within the daily, monthly, and yearly time cycles provide templates for the “refining” (*lian* 鍊) of natural substances (in Waidan) or of the person’s main components (in Neidan).

“Inverting the Course”: From the Postcelestial to the Precelestial

Chinese alchemy uses two main numerical sequences to illustrate the process through which the Dao generates the cosmos. Both sequences describe an ontology (by displaying the hierarchy among those stages) and a cosmogony (by representing those stages as succeeding one another in a metaphoric time).

The *Daode jing* Sequence. The first sequence is Dao → 1 → 2 → 3. This sequence has its *locus classicus* in the *Daode jing* 道德經, or *Book of the Way and Its Virtue*:

The Dao generates the One, the One generates the Two, the Two generate the Three, and the Three generate the ten thousand things. (*Book of the Way and Its Virtue*, sec. 42)

According to one of the several ways in which this passage has been understood within and outside Daoism (Robinet 1995b: 198–203 and *passim*), One, Two, and Three respectively stand for the state of Unity, the emergence of Yin and Yang, and the product of their reconjunction. The “ten thousand things” are the sum of entities and phenomena generated by the continuous reiteration of this three-stage process. In addition, the sequence of the *Book of the Way and Its Virtue* is also associated with three parallel states or stages that the Dao takes on or generates in its self-manifestation: Dao → Spirit (Shen 神) → Breath (Qi 氣) → Essence (Jing 精). After the last of these stages, the Dao gives birth to the cosmos through its own Essence (*jing*; *Book of the Way and Its Virtue*, sec. 21). While all these stages are contained within the Dao, their completion marks the shift from the precelestial to the postcelestial domains (*xiantian* 先天 to *houtian* 後天).

The *Yijing* Sequence. The second sequence used is [Dao →] 1 → 2 → 4.¹ Its *locus classicus* is the “Xici” 繫辭 (“Appended Sayings”) appendix of the *Yijing* 易經, or *Book of Changes*:

Therefore in change (*or*: in the *Changes*) there is the Great Ultimate (*taiji* 太極, Unity). This generates the two principles (*liangyi* 兩儀). The two principles generate the four images (*sixiang*). (*Book of Changes*, “Appended Sayings,” sec. A.11)

This sequence—which continues with the generation of the eight trigrams and the sixty-four hexagrams—intends to show that the modes of change represented by lines, trigrams, and hexagrams are issued from the state of Unity and are ultimately contained within it: the different emblems portray the progressive unfolding of Unity into multiplicity.

In the traditional interpretation of the *Book of Changes*, the two principles are Pure Yang (—) and Pure Yin (--), while the four images are Minor Yang (=-), Greater Yang (=), Minor Yin (=-), and Greater Yin (==). In alchemy, the “two” are understood in the same way, even though they are usually called True Yin (*zhenyin* 真陰) and True Yang (*zhenyang* 真陽). The “four,” instead, are understood differently. Instead of representing the cyclical alternation of the growth and decrease of Yin and Yang, they are seen as different states or qualities of Yin and Yang in the precelestial and postcelestial domains. Precelestial True Yang is Qian ☰, and precelestial True Yin is Kun ☷. The other two principles are Kan ☵ and Li ☲, which respectively stand for postcelestial Yin containing True Yang and for postcelestial Yang containing True Yin.

Application to Alchemy. Both sequences outlined above are used as templates for the “reversion to the origin” (*huanyuan* 還元) that is performed in both Waidan and Neidan. In the Waidan works that do not describe the alchemical process using the emblems of cosmology—which include all those datable until ca. the seventh century—the elixirs are usually compounded by heating the ingredients in a hermetically closed vessel that reproduces the inchoate state (*hundun* 混沌) prior to the emergence of the cosmos. The final product is often called the “essence” (*jing*) of the ingredients. A source dating from ca. 650

1. I place “Dao” within brackets only because it is not explicitly mentioned in the passage quoted immediately below. In the eyes of an alchemist, however, the whole sequence can only begin with the Dao.

equates this essence to the one mentioned in the *Book of the Way and Its Virtue* (sec. 21) as the seed of existence (see Pregadio 2006: 78). However, since many Waidan elixirs hold the Yin and Yang principles reverted to the state of unity, they incorporate all three stages mentioned above.

The three stages of the *Book of the Way and Its Virtue* are even more important in Neidan. Its doctrinal discourse represents the inversion from the postcelestial to the precelestial by different sets of cosmological emblems, but its practice consists in inverting the sequence of the generation of Spirit, Breath, and Essence. Accordingly—as shown in more detail below—the exemplary Neidan practice consists of three stages: (a) refining Essence into Breath; (b) refining Breath into Spirit; and (c) refining Spirit to return to Emptiness, or the Dao. Here the emblematic numbers 1, 2, and 3 also represent the progressive reduction of the components: 3 (Essence, Breath, Spirit) → 2 (Breath and Spirit) → 1 (Spirit) → 0 (Emptiness).

With regard to the sequence of the *Book of Changes*, the main principles are equally shared by both Waidan and Neidan. Precelestial True Yang and True Yin are first extracted from the respective postcelestial counterparts, namely Kan ☵ and Li ☲, and their placements are exchanged. This restores Qian ☰ and Kun ☷, which are then joined to one another in order to reestablish their unity (also represented by Qian, which now stands for the stage prior to Yin and Yang). This process can be represented as shown in fig. 1. A chart drawn by Li Daochun 李道純 (late thirteenth century) makes clear that this representation of the alchemical process also applies to the refining of Essence, Breath, and Spirit in Neidan (see fig. 2).

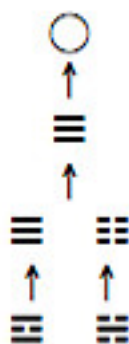


Fig. 1. The three stages of the alchemical process represented by means of trigrams of the *Book of Changes*

In all these cases, the elixir is a token of the successive states taken on by the Dao as it gives birth to the cosmos, reverted to the state prior to their inception—a visible token in Waidan, an invisible one in Neidan. Certain Neidan masters emphasise an additional point. The backward movement of “inverting the course” is, in fact, an upward movement that leads the alchemist from the cosmos to the Dao by means of “doing” (*youwei* 有為, here meaning “doing” the practice). The alchemical work, however, is entirely accomplished only if the course is completed by an opposite movement of descent, performed by “non-doing” (*wuwei* 無為). Therefore, after the three stages of the alchemical practice have been completed, the alchemist should return to the domain from which he had departed, and realise the unity and identity of Dao and cosmos, or timelessness and time.



Fig. 2. The refining of Essence, Breath, and Spirit and the corresponding trigrams of the *Book of Changes*. Li Daochun, *The Harmony of the Centre: An Anthology (Zhonghe ji)*, 2.6a-b

“Following the Course”: Emblematic Time Cycles

The two “regressive” sequences seen above, respectively based on the *Book of the Way and Its Virtue* and on the *Book of Changes*, show how, to use Nathan Sivin’s words, “Chinese alchemical theories were essentially numerological” (Sivin 1976: 521; see also Robinet 2011: 66–72). This feature is even more visible in the three main “progressive” sequences used in alchemy to illustrate the cyclical flow of time. Although, for the sake of clarity, these sequences are described here in a separate section, it should not be forgotten that in both Waidan and Neidan the “progressive” time cycles are embedded in the “regressive” time cycles.

These sequences became relevant to alchemy through the *Zhouyi cantong qi* 周易參同契, or *Seal of the Unity of the Three, in Accordance with the Book of Changes* (hereafter *Unity of the Three*), a work dating, in its present form, from not earlier than the mid-fifth century (and possibly from one or even two more centuries later; Pregadio 2011: 11–26). Under the influence of this work, which changed the history of Waidan and gave origin to Neidan, the trigrams and hexagrams of the *Book of Changes*—and with them the whole basic repertoire of cosmological emblems and terminology—entered the field of alchemy. As far as we know, this occurred for Waidan approximately in the eighth century, the same period in which Neidan also begins to be documented in extant sources.

The cosmological portions of the *Unity of the Three* describe three emblematic time cycles: the day, the month, and the year. In the view of the *Unity of the Three*, these cycles manifest the operation of the One Breath (*yiqi* 一氣) of the Dao in the cosmos. All of them—but especially the third one, as shown in the next sections—became models of Waidan and Neidan practices.

Sixty Hexagrams: The Daily Cycle. The first cycle concerns the thirty days of the lunar month (*Unity of the Three*, sec. 3 and 45; references are to the annotated translation in Pregadio 2011). During each day, the Yang principle prevails at daytime, from dawn to dusk,

and the Yin principle prevails at nighttime, from dusk to dawn. The two parts of the day are ruled by a pair of hexagrams: a Yang hexagram presides over the first half, and a Yin hexagram presides over the second half. Accordingly, sixty of the sixty-four hexagrams are distributed among the thirty days of the month, following one another in the order in which they are arranged in the *Book of Changes* and are described in its “Hexagrams in Sequence” (“Xugua” 序卦) appendix. Zhun ䷵ and Meng ䷃, the first and second hexagrams after Qian and Kun, respectively correspond to daytime and nighttime of the month’s first day. Jiji ䷗ and Weiji ䷆, the next-to-last and last hexagrams, respectively correspond to daytime and nighttime of the month’s last day. The remaining four hexagrams, namely Qian ䷀, Kun ䷁, Kan ䷜, and Li ䷔, reside at the centre. While they are not part of the time cycles, they enable them to occur.

Further, the rise and decline of Yin and Yang during the day is marked and measured by the twelve lines of the ruling pair of hexagrams. Each line is associated with one of the twelve double hours (*shi* 時) and one of the twelve earthly branches (*dizhi* 地支). The six lines of the first hexagram are represented by the first six branches (*zi* 子, *chou* 丑, *yin* 寅, *mao* 卯, *chen* 辰, and *si* 巳), and the six lines of the second hexagram are represented by the last six branches (*wu* 午, *wei* 未, *shen* 申, *you* 酉, *xu* 戌, and *hai* 亥).

“Matching Stems”: The Monthly Cycle. The second cycle concerns the six stages of the lunar month (*Unity of the Three*, sec. 13 and 49). This cycle is represented by the device known as *yueti najia* (Matching Stems of the Moon), which is ascribed to Yu Fan 虞翻 (164–233). The month is divided into six periods (“nodes,” *jie* 節) of five days each: 1–5, 6–10, 11–15, 16–20, 21–25, and 26–30. Each period is portrayed by one trigram and one of the celestial stems (*tiangan*; see table 1). The sequence of trigrams and stems is Zhen ䷲ (*geng* 庚) → Dui ䷱ (*ding* 丁) → Qian ䷀ (*jia* 甲) → Xun ䷲ (*xin* 辛) → Gen ䷎ (*bing* 丙) → Kun ䷁ (*yi* 乙). These trigrams and stems are matched to nodal days in the waxing and waning of the moon: the 3rd (middle day of the first node), the 8th (middle day of the second node), the 15th (last day of the third node), the 16th (first day of the fourth node), the 23rd (middle day of the fifth node), and the 30th (last day of the sixth node). As shown by the sequence of the trigrams, the first half of the lunar cycle is governed by the Yang principle (represented by the solid line), which grows until it culminates in the middle of the month (☰). The second half is governed by the Yin principle (the broken line), which similarly grows until it overcomes the Yang principle at the end of the month (☷).

NODE	DAY	PHASE	TRIGRAM	STEM AND DIRECTION
(1–5)	3	beginning of waxing (<i>shuo</i> 朔)	Zhen 震 ☳	<i>geng</i> 庚 W
(6–10)	8	first quarter (<i>shangxian</i> 上弦)	Dui 兌 ☱	<i>ding</i> 丁 S
(11–15)	15	full moon (<i>wang</i> 望)	Qian 乾 ☰	<i>jia</i> 甲 E
(16–20)	16	beginning of waning (<i>jiwang</i> 既望)	Xun 巽 ☴	<i>xin</i> 辛 W
(21–25)	23	last quarter (<i>xiaxian</i> 下弦)	Gen 艮 ☶	<i>bing</i> 丙 S
(26–30)	30	end of cycle (<i>hui</i> 晦)	Kun 坤 ☷	<i>yi</i> 乙 E

Table 1. The *yueti najia* (Matching Stems of the Moon) device

The most significant aspect of this representation is the symbolic event that occurs in the night between the end of a month and the beginning of the next (*Unity of the Three*, sec. 10 and 48). In the 30th day, the Yang principle is entirely obscured and Kun ☷ (pure Yin) dominates over the entire cosmos. However, during that night the Sun, represented by Li ☲, and the Moon, represented by Kan ☵, meet at the centre of the cosmos and exchange their essences. Their conjunction replicates in the postcelestial domain the conjunction of Qian ☰ and Kun ☷ in the precelestial domain. The monthly conjunction of the Sun (日) and the Moon (月) regenerates the light (明): Kun performs her motherly function and gives birth to her first son, Zhen ☳, the initial trigram in the new lunar cycle, whose lower Yang line represents the rebirth of light. After an instant of suspension, time again begins to flow, and the next month begins.

“Twelve-Stage Ebb and Flow”: The Yearly Cycle. The third cycle concerns the twelve months of the year (*Unity of the Three*, sec. 51). Usually called Twelve-stage Ebb and Flow (*shi'er xiaoxi* 十二消息), this cycle represents change by the twelve “sovereign hexagrams” (*bigua* 辟卦). This representation ultimately derives from Meng Xi’s 孟喜 (fl. 69 BCE) cosmological device known as Breaths of the Hexagrams (*guaqi* 卦氣). Meng Xi assigns four hexagrams, namely Zhen ☳, Li ☲, Dui ☱, and Kan ☵, to the four seasons, and each of their lines to one of the twenty-four “nodal breaths” (*jieqi* 節氣) of the year. In a development of this system attributed to Jing Fang 京房 (77–37 BCE), the remaining sixty hexagrams are related to the twelve months in five sets of twelve. The “sovereign hexagrams” are one of the five sets.

Analogously to the Matching Stems, here too the solid and broken lines flow first upwards and then downwards (see table 2). Beginning with Fu ☱, which stands for the first stage of the growth of Yang at the winter solstice, each hexagram represents one lunar month. The twelve-stage sequence also establishes correspondences with other duodenary series: the earthly branches (*dizhi* 地支), the bells and pitch-pipes (*zhonglü* 鐘呂), and the double hours (*shi*) of the day.

☱	☱	☱	☱	☱	☱	☱	☱	☱	☱	☱	☱
復	臨	泰	大壯	夬	乾	姤	遯	否	觀	剝	坤
fu	lin	tai	dazhuang	guai	qian	gou	dun	pi	guan	bo	kun
子	丑	寅	卯	辰	巳	午	未	申	酉	戌	亥
zi	chou	yin	mao	chen	si	wu	wei	shen	you	xu	hai
黃鐘	大呂	太簇	夾鐘	姑洗	仲呂	蕤賓	林鐘	夷則	南呂	無射	應鐘
huangzhong	dalü	taicou	jiazhong	guxi	zhonglü	ruibin	linzhong	yize	nanlü	wuyi	yingzhong
11	12	1	2	3	4	5	6	7	8	9	10
23–1	1–3	3–5	5–7	7–9	9–11	11–13	13–15	15–17	17–19	19–21	21–23

Table 2. The twelve “sovereign hexagrams” (*bigua*) and their relation to other duodenary series: earthly branches (*dizhi*), bells and pitch-pipes (*zhonglü*), months of the year, and “double hours” (*shi*)

Time in Waidan

Waidan alchemists shared with their companions in other cultures the idea that their work reproduces the processes by which minerals and metals are transmuted into gold within the earth’s womb. In their way of seeing, the elixir compounded in the alchemical laboratory has the same properties as the Naturally Reverted Elixir (*ziran huandan* 自然還丹), which nature refines in a cosmic cycle of 4320 years. This number corresponds to the total sum of the twelve double hours included in the 360 days that form one year according to the lunar calendar (Sivin 1976: 515–16, and 1980: 264–66). The alchemical work, therefore, reproduces in a relatively short time the same process that requires an entire cosmic cycle to occur. The *Insights on the Purport of the Alchemical Treatises* (*Danlun juezhi xinjian* 丹論訣旨心鑑) states:

The Naturally Reverted Elixir is formed when Flowing Mercury, embracing Sir Metal (i.e., lead), becomes pregnant. Wherever there is cinnabar there are also lead and silver. In 4320 years the elixir is finished. Realgar to its left, orpiment to its right, cinnabar above it, malachite below. It embraces the *qi* of Sun and Moon, Yin and Yang, for 4320 years; thus, upon repletion of its own *qi*, it becomes a Reverted Elixir for immortals of the highest grade and celestial beings. When in the world below lead and mercury are subjected to the alchemical process for purposes of immortality, [the elixir] is finished in one year. (*Insights on the Purport of the Alchemical Treatises*; trans. based on Sivin 1976: 516, and 1980: 232)

The reduction of an extended cosmic cycle to one year—in other words, from 4320 years to 4320 double hours—is achieved by phasing the heating of the elixir ingredients according to suitable time patterns. These patterns are provided by the system of the Fire Phases (*huohou* 火候, also rendered as Fire Times or Fire Regime), which is modelled on the “Twelve-Stage Ebb and Flow” of the *Unity of the Three*. In agreement with this model, firing is progressively increased during the first six stages, and then decreased during the last six stages. The *Unity of the Three* hints at the application of this system to alchemy by saying about the elixir:

Watch over it with heed and caution: inspect it attentively and regulate the amount of its warmth. It will rotate through twelve nodes, and when the nodes are complete, it will again need your care. (*Unity of the Three*, sec. 40; Pregadio 2011: 91 and 176–77)

Several varieties of the Fire Phases system exist in Waidan (Sivin 1980: 266–79), but a particularly important example is provided by Chen Shaowei 陳少衛, who lived in the early eighth century (Sivin 1976: 519–20, and 1980: 272–73). Starting at the midnight of the first day of a sixty-day cycle in the month of the winter solstice (the eleventh month, which marks the beginning of the yearly cycle), fire is progressively increased by feeding growing amounts of charcoal to the furnace through its six Yang doors, at intervals of five days for each door—that is, for six times and altogether one month. Heating then is progressively decreased for another month by placing lower amounts of charcoal in the furnace through its six Yin doors. This operation also is repeated six times, so that the whole process takes one

year. When this procedure is read in the light of the time cycles described in the *Unity of the Three*, it appears clear that Chen Shaowei intended to model the heating process not only on the cycle of the year, but also on the cycle of the month, which is made of six periods of five days.

The compression of time achieved by means of the Fire Phases is a crucial aspect of Waidan, but the creation of the alchemical microcosm also requires a smaller-scale representation of space. Chen Shaowei’s furnace provides an example: its squared shape represents the four directions, and its twelve doors are arranged in three tiers corresponding to Heaven (top), Earth (bottom), and Humanity (middle). Several other spatial correspondences may be embodied in the furnace, the reaction vessel, and the arrangement of the laboratory itself (Sivin 1980: 279–97). By placing himself in the spaceless centre of this microcosmos, the alchemist was able to observe the unfolding of a complete cosmic cycle. As bringing time to its end is the same as bringing it to its beginning, he was able to see the state of timelessness in his elixir.

Time in Neidan

As mentioned above, Neidan purports to restore the state prior to the shift from the precelestial to the postcelestial domains, which occurs as the Dao gives birth to the cosmos through its own Spirit (Shen), Breath (Qi), and Essence (Jing). Accordingly, the model Neidan practice consists of a preliminary stage, followed by a gradual sequence in which each of the three elements is reintegrated into the previous one. The preliminary stage serves to replenish Essence, Breath, and Spirit in the human body and to clear the vessels along which they are circulated. The respective functions of the three main stages are refining the Essence in order to conjoin it with Breath; refining that Breath in order to conjoin it with Spirit; and refining that Spirit in order to “return to Emptiness,” or the Dao. As part of the first stage, Neidan includes a practice that bears several analogies to the Fire Phases of Waidan.² (Extended descriptions of the Neidan practice in different times and subtraditions are found in Despeux 1979: 48–82; Baldrian-Hussein 1984: 59–193; Robinet 1995a:103–45; Wang Mu 2011.)

The Lesser Celestial Circuit. At the end of the preliminary stage, Essence, Breath, and Spirit are collected in the lower Cinnabar Field. In the “living *zi* hour” (*huo zishi*, which marks the beginning of the daily time cycle, but is so called in order to distinguish it from the ordinary *zi* “hour,” corresponding to 11pm–1am), the External Medicine (*waiyao* 外藥) emerges as “original Essence” (*yuanjing* 元精). The first stage of the practice consists in circulating this Essence along a route called Lesser Celestial Circuit (or Lesser Celestial Orbit, *xiao zhoutian*

2. Neidan practices include several varieties, but many of them are based on the pattern outlined above. It should also be mentioned that these or similar sequences—which are said to give initial priority to the cultivation of *ming* 命 (one’s existence or embodiment)—do not exhaust the field of Neidan. In other cases, the practice initially gives emphasis to *xing* 性 (one’s inner nature) and consists in removing the causes of its obfuscation. These two emblematic modes of Neidan practice are typically merged in the “conjoined cultivation of nature and existence” (*xingming shuangxiu* 性命雙修).

小周天) by means of repeated breathing cycles. This route is named “lesser” in contrast with the Greater Celestial Circuit (or Greater Celestial Orbit, *da zhoutian* 大周天), which is used in the second stage of the practice (Despeux 1979: 57–63; Baldrian-Hussein 1984: 88–105; Robinet 1995a: 120–31; Neswald 2009: 35–37; Wang Mu 2011: 71–86).³

The Lesser Circuit is based on two of the eight “extraordinary vessels” (*qijing* 奇經), namely the *dumai* 督脈 (variously translated as Function, Governor, or Superintendent Vessel) and the *renmai* 任脈 (Control or Conception Vessel). The *dumai* vessel runs along the back of the body, from the Meeting of Yin cavity (*huiyin xue*) near the coccyx to the Mouth Extremity cavity (*duiduan xue* 兌端穴) above the upper lip. The *renmai* vessel runs along the front of the body, from the Meeting of Yin cavity to the Receiver of Fluids cavity (*chengjiang xue* 承漿穴) below the lower lip. In the Neidan view, the “circuit” itself is actually completed by the two Magpie Bridges (*queqiao* 鵲橋), which conjoin the two vessels: the upper Bridge, placed at the Meeting of Yin cavity, and the lower Bridge, placed between the palate and the tongue (or identified with the tongue itself). Through the conjunction of the two vessels, the Essence can be circulated in a way contrary to its ordinary downward flow: first it rises to the upper Cinnabar Field (crossed by the *dumai*), then it descends again to the lower Cinnabar Field (crossed by the *renmai*).



Fig. 3. The twelve stages of the Lesser Celestial Circuit (*xiao zhoutian*). SOURCE.

3. In Chinese astronomy, “lesser circuit” defines the year cycle made of twelve months, and “greater circuit” defines the Jupiter cycle made of twelve years. As used in Neidan, however, the two terms only refer to the lower and the higher stages of the practices in which the “lesser” and the “greater” circuits are used, respectively.

The Lesser Circuit is further subdivided into twelve segments, which are designated by any of the duodecimal series of cosmological emblems—such as the twelve “sovereign hexagrams” and the twelve earthly branches—but are especially tied to the twelve double hours of the days (see fig. 3). This correspondence is often said to be symbolic and not to be understood in a literal sense: the twelve segments only serve to determine the stages of the Fire Phases, or the varying intensity of heat to be applied in order to refine the Essence. As in Waidan, a progressively stronger “martial fire” (*wuhuo* 武火) is used in the first six stages, which correspond to the ascent of the Essence along the *dumai* vessel (in terms of the earthly branches, from *zi* 子 to *si* 巳); and a progressively weaker “civil fire” (*wenhuo* 文火) is used in the last six stages, corresponding to the descent of the Essence along the *renmai* vessel (from *wu* 午 to *hai* 亥). These two main stages of the Fire Phases are called “advancing the Yang Fire” (*jin yanghuo* 進陽火) and “withdrawing the Yin Tallies” (*tui yinfu* 退陰符, i.e., responding to the progressively stronger heating by a progressively weaker heating, in order to moderate and temper the Yang of the first half of the cycle). Fire corresponds in Neidan to Spirit, and the active faculty of Spirit (or True Intention, *zhenyi* 真意) leads the entire process: “Spirit leads Breath and refines the Essence” (Wang Mu 2011: 52). At the two intermediate points of the Lesser Circuit (represented by the branches *mao* in the back and *you* in the front of the body), one should “bathe” (*muyu* 沐浴), that is, temporarily suspend the heating process.

With regard to time, the Fire Phases of Neidan enable the simultaneous operation of two antithetical sequences: the “progressive” sequence of ordinary time, represented by the twelve segments, is encased in a “regressive” sequence, represented by the circulation of the Essence in a way contrary to its ordinary downward flow. This process, in turn, is the first part of the inversion of time to timelessness performed in Neidan.



Fig. 4. The Waterwheel (*heche*). *Chart of the Inner Warp* (*Neijing tu*), detail.

As it does in Waidan, the Neidan practice of the Fire Phases also requires the use of a spatial framework. This framework is provided in the first place by the “circuit” itself. In the lower part of its course is found the Waterwheel, or *heche* 河車 (“water-raising machine,” Needham 1983: 250); this instrument is pictured in the well-known *Chart of the Inner Warp* (*Neijing tu* 內經圖), where it inverts the downward flow of the Essence and enables it to begin its upward course (fig. 4). In another sense, the *heche* is understood as the River Chariot, the vehicle that drives the Essence along the Lesser Circuit (fig. 5). Due to its

symbolic importance, moreover, *heche* is also used as a synonym of the Lesser Circuit and the related practices.⁴

The “chariot” metaphor and the spatial features of the Lesser Circuit reappear in relation to the three barriers (or passes, *sanguan* 三關), which are three key points in the back of the body: (1) the Caudal Funnel (or Tail Gate, *weiliu* 尾閭), placed at the base of the spine; (2) the Spinal Handle (or Spinal Straits, *jiaji* 夾脊), placed in the middle of the spine, across from the heart; (3) the Jade Pillow (*yuzhen* 玉枕), placed at the level of occipital bone, across from the mouth. As shown by the expression “three fields in the front, three barriers in the back” (*qian santian, hou sanguan* 前三天後三關), the three barriers are seen as corresponding to the three Cinnabar Fields in the front of the body. The barriers are said to be arduous to overcome. Drawing from the metaphor of the three Vehicles of gradual liberation that prefigure the Highest Vehicle in the Buddhist *Lotus Sutra* (Watson 1994: 56-62), the practitioner each time is enjoined to proceed as if he was riding a cart, loaded with the Essence and driven first by a goat (that is, lightly and slowly), then by a deer (lively and quickly), and lastly by an ox (strongly and powerfully). (See Despeux 1994: 80–87 and 149–51; Neswald 2009: 42–45; Wang Mu 2011: 34–36 and 83–84.)



Fig. 5. The River Chariot (*heche*). Xiao Tingzhi, *The Great Achievement of the Golden Elixir: An Anthology (Jindan dacheng ji)*, 9.3b.

Finally, it should be noted that the Lesser Circuit has, for some of its aspects, two main antecedents, both of which pertain to the Yangsheng 養生 (Nourishing Life) practices. The first one is the variety of breathing methods first documented in the “Circulating Breath” (“Xingqi” 行氣) inscription on jade, dating from the Warring States (Needham 1983: 142; Harper 1998: 125–26). The second is the method of “reverting the essence to replenish the brain” (*huanjing bunao* 還精補腦, where “essence” means the male semen) of the sexual practices (*fangzhong shu* 房中術), also known to have existed in the same period (Despeux

4. In fact, the term *heche* is even more complex. In its earliest sense, found in the *Unity of the Three* (sec. 22), this term means the metal lead, which in *Neidan* corresponds to the Essence. The metaphors represented by the *heche*, therefore, include at the same time the Essence, the instrument that accomplishes its inversion, the vehicle that transports it along the Lesser Circuit, and the Lesser Circuit itself.

2008). In both cases, however, there are essential differences compared to the Neidan practice. The method outlined in the jade inscription, and all those modelled on the same pattern, require practitioners to circulate breath first downwards and then upwards—exactly the opposite compared to the Neidan pattern. The “reversion of the essence” in the sexual practices, instead, does follow an ascending path, but does not comprise the crucial descending half of the cycle, which coagulates the Essence into the seed of the Internal Elixir. In both cases, we have examples of a recurrent pattern in Neidan, which draws from earlier methods or ideas, but adjusts them to suit its own views and purposes.

The Greater Celestial Circuit. The operation of the two contrasting sequences mentioned above results, after repeated cycles (sometimes said to be 300 or 360), in the formation of the Internal Medicine (*neiyao* 內藥). As soon as it is formed, the Internal Medicine should be conjoined with the External Medicine in order to generate the Great Medicine (*dayao* 大藥) in the lower Cinnabar Field. The Great Medicine is also called “mother of the elixir” (*danmu* 丹母): after a further seven days of refining (called “entering the enclosure,” or *ruhuan* 入環), it conceives the Embryo (*tai* 胎).⁵

The Embryo is equivalent to the Breath (theoretically denoted by the graph 「炁」 instead of 「氣」, although this rule is not always followed) formed by the conjunction of Essence and Breath. The second stage of the practice consists in nourishing it between the middle and the lower Cinnabar Fields for ten metaphoric months (the time required for gestation in the Chinese reckoning) by means of the Greater Celestial Circuit. However, this second stage is unrelated to time in the ordinary sense of the word. While the “living *zi* hour” of the Lesser Circuit symbolises the beginning of a time cycle reproduced by the alchemist in his practice, the Great Medicine is said to appear in the “true *zi* hour” (*zheng zishi* 正子時, lit., “correct *zi* hour”). Notwithstanding the allusion to the beginning of a time cycle (the *zi* hour), this term only denotes “a state or a condition; one could call it a sign that the Great Medicine has been completed” (Wang Mu 2011: 107). While the absence of an exemplary time pattern, such as the one provided by the Fire Phases, results in different sources giving different descriptions of the Greater Circuit, its practice involves all of the eight “extraordinary vessels,” with no subdivisions into sequences or stages. The stages of “bathing” also have no temporal correspondences, even symbolic: “bathing” now consists in “washing the mind and cleansing the thoughts, steaming them with the True Breath (*zhenqi* 真氣), observing subtle silence and brightness with the eyes, and preventing the mind from wandering around unrestrained and becoming unstable” (Wang Mu 2011: 103).

All this shows that the task of reverting ordinary time to its origins is essentially performed in the first stage of the practice. From the second stage onwards, a different time scale applies, unrelated to time as we ordinarily understand and measure it. In the third and final stage, the Embryo is moved to the upper Cinnabar Field and is finally delivered through

5. Seven is an important number in Neidan, as it represents the rebirth of the Yang principle (the first solid line of Fu ☱) from the Yin principle (the six broken lines of Kun ☷). As for the term *ruhuan*, it appears to derive from, or to be related to, the Quanzhen meditation practice of retirement in the *huandu*, “enclosure,” which originally lasted one hundred days or three years, and later was performed for shorter periods. The Quanzhen *huandu* retirement in turn bears analogies with the Buddhist practice of *biguan*, or “confinement” in a solitary cell.

the sinciput. The Infant (often called Red Child, *chizi* 赤子) is then first “breast-fed” (*buru* 哺乳) and later nourished for nine symbolic years (the time that, according to tradition, Bodhidharma spent in meditation facing a wall after he transmitted Chan Buddhism from India to China, but also the number that represents Great Yang). As the practitioner “returns to Emptiness,” his Infant—an immortal replica of himself—roams throughout spacelessness and timelessness.

Time as a Metaphor

The Fire Phases are said to be one the most important aspects but also one of the most carefully guarded secrets of Neidan. Statements found in different sources indicate that one of the main issues is knowing when to terminate them and proceed to the higher stages of the practice. However, the whole discourse is framed in a way that both emphasises their importance and warns that the main points are left unsaid. Zhang Boduan 張伯端 (987?–1082), who is placed at the origins of the Southern Lineage (Nanzong 南宗) of Neidan, says at first in his *Awakening to Reality* (*Wuzhen pian* 悟真篇):

Even if you discern the Vermilion Sand and the Black Lead,
it will be useless if you do not know the Fire Phases.
(*Awakening to Reality*, “Jueju” 絕句, no. 27)

Then it adds, with a reference to the *Seal of the Unity of the Three*:

The *Seal* and the treatises, the scriptures and the songs expound ultimate reality,
but do not commit the Fire Phases to writing.
If you want to know the oral instructions and comprehend the mysterious points,
you must discuss them in detail with a divine immortal.
(*Id.*, “Jueju,” no. 28)

A later Nanzong master, Xue Daoguang 薛道光 (1078?–1191), is ascribed with a similar statement often quoted in later sources: “The sages transmit the Medicine, but do not transmit the Fire” (*Huandan fuming pian* 還丹復命篇, “Qiyán jueju” 七言絕句, no. 11).

Within this context, one of the main underlying points is how to deal with the ordinary onward progression of time while concurrently undertaking the return to timelessness. The Fire Phases provide a valuable model, as they make it possible to begin the practice by following a progressive time sequence while submitting the Essence (the most basic component of the human being) to a course contrary to its ordinary flow. In the next stages, the practice continues by entering a different time frame (represented by the “true *zi* hour”) and is concluded with the return to timelessness. This procedure could not succeed if the time cycles of the Fire Times were followed in a literal way, as the practitioner would not be released from time as it occurs in the cosmic domain. The time of the Fire Phases is by its very nature a metaphoric time.

This issue has been repeatedly approached during the history of Neidan. The Zhong-Lü 鐘呂 texts—written from the second half of the Tang period onwards, and belonging to the

earliest identifiable tradition of Neidan—seem to interpret various emblematic macro-microcosmic correspondences, including the Fire Phases, in quite literal ways. Examples of this understanding are found in the main Zhong-Lü doctrinal treatise, the *Zhong-Lü chuandao ji* 鍾呂傳道集 (Anthology of the Transmission of the Dao from Zhongli Quan to Lü Dongbin; sec. “Lun heche 論河車”, or “Discussion of the Waterwheel”); and in the main text devoted to the practice, the *Lingbao bifa* 靈寶畢法 (Secret Methods of the Numinous Treasure; see Baldrian-Hussein 1984: 237–59, and her explanations, 116–59).

This attitude changes in the Southern Lineage texts and in the later Neidan tradition, to such an extent that warnings about a literal understanding of the time sequences probably are more numerous—and certainly more authoritative—than descriptions of the sequences themselves. With a clear reference to the “Twelve-Stage Ebb and Flow,” Zhang Boduan advises against strictly patterning one’s practice on any time course established by sequences of cosmological emblems:

The whole world delusively clings to the [hexagram] images:
they practice the “breaths of the hexagrams” (*guaqi*) and hope thereby to rise in flight.
(*Awakening to Reality*, “Jueju,” no. 37)

The preface to another work attributed to Zhang Boduan, the *Four Hundred Words on the Golden Elixir* (*Jindan sibai zi* 金丹四百字), describes several macro-microcosmic correspondences, saying for instance that the 30,000 “quarters of hour” (or “intervals,” *ke* 刻) contained in the ten months of the gestation of the Embryo correspond to a cosmic cycle of 30,000 years. It adds, though, that the whole alchemical work actually occurs in the One Opening (*yiqiao* 一竅), the non-material centre of the human being where ordinary time and space do not apply:

If one is able to understand this Opening, then the winter solstice, the Medicine, the Fire Phases, the bathing, the coalescing of the Embryo, and the delivery of the Embryo are all found there. (*Four Hundred Words on the Golden Elixir*, Preface)

One of the poems found in this work is famous for saying:

The Fire Phases do not depend on the hours,
and how could the winter solstice be at *zi*?
As for the method of bathing,
the times of *mao* and *you* are empty similitudes. (*Id.*, poem no. 13)

Many later works quote an analogous statement attributed to Bai Yuchan 白玉蟾 (1194–1229?): “The True Fire fundamentally has no phases.”

Li Daochun (late thirteenth century) gives an extended description of the Fire Phases, but laments that while they are only meant to provide a template for the practice, many understand them in a literal way. In his *Harmony of the Centre: An Anthology* (*Zhonghe ji* 中和集), he reiterates that the alchemical work takes place in the One Opening, and reminds that the practice has nothing to do with the year, the month, or the day: “The birth of the Medicine has its times, but these are not the time of the winter solstice, the time of the birth

of the moon, or the time of the *zi* hour” (sec. “Zhao Ding’an wenda” 趙定菴問答, or “Questions and Answers with Zhao Ding’an”).

The later Longmen 龍門 (Dragon Gate) tradition shows another way of dealing with the same issue. The famous *Secret of the Golden Flower* (or *Taiyi jinhua zongzhi* 太一金華宗旨, ca. 1700), placed by Min Yide 閔一得 (1748–1836) at the source of the Jin’gai 金蓋 lineage of Longmen, is mainly devoted to the practice of “reversing the light” (*huiguang* 回光) within the practitioner’s person. About this practice, the *Secret* says: “The reversion of the light is the same as the Fire Phases” (sec. 3). Min Yide, however, also proposed a different view. In one of his works, he refers to the Lesser Circuit by calling the *dumai* vessel the Black Path (*heidao* 黑道), and the *renmai* vessel the Red Path (*chidao* 赤道). In addition, he describes a Yellow Path (*huangdao* 黃道), which is placed between them. While this term ordinarily is a synonym of the Lesser Circuit, in Ming Yide’s view the Yellow Path overrides the other two vessels and directly connects the three Cinnabar Fields to one another. This “central path,” also called the “path of the immortals” (*xiandao* 仙道), allows a practitioner to achieve the whole alchemical work in one instant, without depending on gradual stages or on time sequences (Esposito 2001: 209–13).

Many other views of time in Neidan deserve attention; in particular, those of Liu Huayang 柳華陽 (1735–99; Wilhelm 1962: 71–74; Wong 1998: 29–35), and those of Zhao Bichen 趙避塵 (1860–after 1933; Lu 1964: 35–37 and *passim*; Despeux 1979: 55–63 and 106–10). However, perhaps nothing better than a statement by Liu Yiming 劉一明 (1734–1821), found in his *Xiuzhen houbian* 修真後辨 (Further Discriminations in Cultivating Reality, sec. “Zi, Wu, Mao, You”), summarises the way in which ordinary time is seen in the context of the Neidan tradition as a whole. Mentioning the four cardinal earthly branches, which represent the quarters of the day and the seasons of the year, Liu Yiming says: “Alas! Those are the *zi*, *wu*, *mao*, and *you* of Heaven: what do they have to do with me? Heaven has Heaven’s time, I have my own time.”

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