Appendix III

Go and Ancient Chinese Divination: A Commentary on *A Journey in Search of the Origins of Go* By Shirakawa Masayoshi (Yutopian 2006)

By Peter Shotwell

Note: For those who have already read what was posted to the Bob High Memorial Library (www.usgo.org/bobhighlibrary) in October 2006, I have used asterisks (*) to indicate the major revisions. Many are due to John Fairbairn's generous commentaries, and the rest take note of the editing of the new Appendices IV and V, but I take responsibility for any errors or misinterpretations.

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Introduction

Much of this essay is a continuation of a discussion that began in the main Origins article and has extended through its Appendices. The question is, did go and other strategic board games, such as mancala, develop from early divination practices, as many anthropologists and go historians have assumed, or did they evolve independently?

As readers familiar with the literature of the history of games and/or my article on 'Go and Cognitive Psychology' in this e-library, that question seems to involve more than just historical accuracy. For example, it touches on fundamental issues raised by the Daoist soldier-philosophers of the School of Strategy, c. 500-300 BC, and by Western academia only towards the end of the last century. As also discussed towards the end of my Origins text, and by Wim van Binsbergen in Appendix II, there seems to be a relativistic, game-playing ecstatic core of human life that curiously both extends beyond our usual concepts of 'rationality,' and yet seems to lie within them. This playful, independent core seems to have expressed itself in the invention or discovery of thinking games and seems to continue to define an important part of our humanness.

Since so little has been written in English about the origins of go, the translation from Japanese of a book with such a seductive title naturally draws one's attention. However, close scrutiny of Shirakawa's attempts to link early Chinese go with divination reveals many flaws. Unfortunately, these may not be so evident to readers who are not familiar with the vastness of these often esoteric and obscure fields.

I apologize for the length of this commentary, but for the sake of completeness, there didn't seem to be a choice because so much needed explaining, Shirakawa did so little of this, and the little he did was often misguided. Also, for the sake of readability and completeness, I extracted from the reviewed book, my main Origins text and the other four Appendices, so that it would not be necessary to refer back to them. I also lingered on some subjects just because they were interesting and entertaining.

I also apologize because the narrative of this review seems to jump around, but it was hard to follow Shirakawa's 'journey' because it was stitched together from a series of articles he wrote over several decades. Without seeming to do much editing, he constantly begins themes, discusses them for awhile and sometimes doesn't fully explain them before leaping onto something else, only to return to them later. The results often confuse and mask inconsistencies in his arguments.

However, there is a shorter (and perhaps more digestible), version of this essay that focuses entirely on divination and go in the 2006 Proceedings of the International Conference on Baduk, sponsored by the Baduk Department of Myongji University in Korea.

As in the rest of this article, every paragraph or even every sentence could be footnoted, but the overriding concerns were not to be tedious and to make this Appendix e-friendly as possible (because that is now possible :) I italicize all unfamiliar foreign words in what I write for easier reading, but retain the individual styles of the quoted sections and put them into italics.

As always, the interchange of ideas and what will come out of the ground will influence future thought, so nothing here should be taken as definitive, but rather should only be taken as a basis for further research.

Bibliography

Unless noted, my sources come from the following articles, which should be read by those interested in a more complete picture:

There is an excellent review of the history of Chinese religions and philosophies at http://www2.kenyon.edu/Depts/Religion/Fac/Adler/Writings/Chinese%20Religions%20-%20Overview.htm

For the complete translation of *The Preface to Xuan Xuan Qi Jing* and an encyclopedia and database of go, see John Fairbairn and T. Mark Hall's GoGod CD at www.gogod.demon.co.uk

For those interested in a more extensive account of the development of Nine Star Divination, please go to http://www.fengshuigate.com to see a series of articles by Stephen L. Field.

For a general e-background on the *Yi Jing* (*Book of Changes*), please go to http://pacificcoast.net/~wh/Index.html

For the background of my comments on the Yellow River and Luo River Maps, see the following articles by Schuyler Cammann, who was the leading scholar of magic squares and their relation to the history of trigrams and hexagrams. The four most important are:

'The Magic Square of Three in Old Chinese Philosophy and Religion,' *History of Religions*, Vol. 1 (Summer 1961), pp. 37-80 and its update, 'Some Early Chinese Symbols of Duality;' *History of Religions*, Vol. 24, No. 3 (Feb. 1985), pp. 213-254; 'Chinese Hexagrams, Trigrams and the Binary System,' *Proceedings of the American Philosophical Society*, Vol. 135, No. 4 (Dec. 1991) pp. 576-589, and a summation just before his tragic death, 'The Origins of Circular Trigrams in Ancient China,' in the *Museum of Far Eastern Antiquities Bulletin (Stockholm)*, Vol. 62 (1990), pp. 185-212.

All of his articles except the last can be read in institutions that have access to JSTOR, the on-line service that has now made almost all academic journals readily available on the Internet. I have tried to note what Cammann added there to his previous work. It should be noted that JSTOR purposely stays 1-2 years out-of-date, which makes for a deficiency in this paper that I will try to correct once I have access to current journals that are not available where I live. If there are any serious changes, a new Appendix will be added.

As for books, one recent work on magic squares (Legacy of the *Luo Shu*: The *Mystical, Mathematical Meaning of the Magic Square of Order Three* by Frank J. Swetz) strangely uses only early Cammann, despite being published in 2002. Thus, while it has some interesting material on the *yin-yang, Luo Shu* cycles not found in Cammann, it makes a number of misstatements.

Another recent book, (*The Zen of Magic Squares, Circles and Stars: An Exhibition of Surprising Structures across Dimensions* by Clifford A. Pickover) is a good overview of the international history of the squares and other 'magical' forms, but it has only a few, uninformative pages on the *Luo Shu* (and, also surprisingly, doesn't mention Cammann at all).

To take a interesting look at what esoteric, oral Daoism is all about, go to 'Magic Numbers, Planetary Tones and the Body: The Evolution of Daoist Inner Alchemy into Modern Sacred Science' by Michael Winn at
http://www.healingtaousa.com/pdf/dao_inner_alchemy.pdf

Beginning on page 14 is a discussion of the Paleolithic Meander carvings that motivated Cammann to intensify his work on early Chinese magic squares.

For a greatly simplified, but entertaining, interactive approach to Nine Star and other Asian divination practices, try
http://www.geocities.com/Athens/Delphi/9911/01software.html

Relevant Dates

Yao, Shun and Dan Zhu*	c. 2100 BC
Shang Dynasty	c. 1575-1046 (or 1027) BC
Zhou Dynasty	1046 (or 1027)-771 (or 256) BC
Spring and Autumn Period	722-481 BC
Warring States Period	480-221 BC
Qin Dynasty	221-207 BC
Han Dynasty	206 BC-220 AD
Three Kingdoms Period	220-265 AD
Wei Dynasty	220-265 AD
Jin Dynasty	265-420 AD
Six Dynasties Period	220-589 AD
Sui Dynasty	580-618 AD
Tang Dynasty	618-907 AD
Song (or Sung) Dynasty	960-1279 AD
Yuan (Mongol) Dynasty	1271-1368 AD
Ming Dynasty	1368-1644 AD
Qing (Manchu) Dynasty	1636-1911 AD

*mythical

Part I

Overview

There are many good reasons for taking a look at the intriguingly-titled book, *A Journey in Search of the Origins of Go*, but there are also far too many reasons to read it with care.

First, what I think are the good parts:

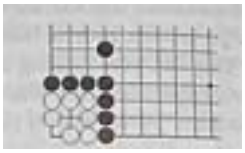
Rendered in an excellent and smooth translation are large amounts of old go history that have previously been available only in Chinese and Japanese. In particular, biographies of the go-playing personalities of *The Romance of the Three Kingdoms*, written in the 12th century by Luo Guanzhong, make it a useful companion when reading that account of the break-up of the Han dynasty around 220-265 AD. Besides being a mesmerizing story, *The Romance*, along with *Water Margin*, and the relevant sections of Sima Qian's *Historical Record* are must-read books for anyone interested in the development of Chinese Daoist-oriented strategic thinking.

History-of-go-rules buffs will enjoy reading about the famous 16th century erotic novel, *The Plum in the Golden Vase*, in which China's most notorious lover lost a game because of the idea of *kirichin*. Shirakawa gives an extended examination of the logical necessity for giving up a point for each separated group when using Chinese rules of counting living stones as territory. Since the last two eyes cannot be filled without killing the group, they do not count as points.

He also examines the effect of the penalty would have had on the score of an old game record. This was one of four in the 12th century AD *Carefree and Innocent Pastime Collection* that led to the discovery by Harvard's Lien-Sheng Yang that the Chinese used Japanese territorial counting from at least the Tang era (618-907 AD) into the Ming (1368-1644 AD), and perhaps before.

Shirakawa says that the *kirichin* rule was abandoned after the Chinese started playing Japanese-style go with no pre-placed stones in the corners, although they kept their system of counting by not taking prisoners. He also says that *kirichin* lies at the base of Japanese rules, which state that each group must have two eyes. Thus, the results of the game in question comes out to be the same

as the Japanese count after *kirichin* is applied to the Chinese score. He suggests that this links the two rules sets and lays the possibility for an agreement on a unified system of counting.



At the end of this imaginary game, using Chinese rules that count stones and territory, kirichin *gives White only seven points because the two eyes cannot be filled. In other words, there is a two-point penalty per group.*

For those thinking of traveling and playing in the Middle Kingdom, there are many pleasant anecdotes of Shirakawa's extensive visits and handicap games against such Chinese masters as Nei Wei Ping and Chen Zude. In addition, there are personal asides, strategic hints and a useful glossary of Chinese and Japanese go terms.

Shirakawa also theorizes on the location and life of the legendary 3rd century AD empress Himiko, the subject of fierce debates since Edo times. He admits it is his 'pleasant fantasy' that 'she might have played go,' but he spends a considerable amount of time trying to prove why this could be so, and that go could have come to Japan before the commonly accepted dates of 500-700 AD.

In particular, in Chapter One, he recounts how Chinese contemporaries of the Wei dynasty received a mission from Himiko in 238 AD. In his enthusiasm to find an early date for both Japanese and Chinese go, he concludes that, 'since the divination of that period is connected with go,' Himiko 'might have had a go board,' which might, someday, be found.

He also suggests that because it is written in old chronicles that the Japanese used to write on deer oracle bones, 'therefore' they used divination methods 'similar' to those of the three-thousand year-old Shang dynasty in China, (who used heated, cracked animal scapulae and the dried plastrons of turtles to ask questions of their ancestors).

There are several problems with these statements.

First of all, he follows his introduction to the Himiko theme, which is scattered through the book, by noting that the Chinese character for ‘go’ appears in Onogoro, the legendary island where the Japanese creation myth takes place. Coming directly after a break in the story of Himiko, and faced with the organization of this section, the un-careful reader is likely to conclude that this is further proof that Himiko could have played go.

The problem is, as Shirakawa himself casually mentions on the previous page, but without drawing attention to the correct conclusion, there was no written Japanese when the myth of Onogoro was recorded in 712 AD. He says, ‘ . . . the writers used the characters that had been introduced from China, mixing the original Chinese pronunciations and meanings with the Japanese pronunciations and meanings.’

In other words, the character for ‘go’ was used for pronouncing the name of the island and may not have referred to the game at the time of the composing of the myth, or in Himiko’s time.

*However, John Fairbairn, in a personal communication, cautioned that there were other characters available that were pronounced the same, so that the one they used may have referred to the game for some reason. But the problem is that Shirakawa goes on to assertively conclude that ‘ . . . [this] provides evidence that go was already introduced into Japan before the 8th century.’

It has largely been accepted that the story of Kibi-no-Makibi’s carrying back go from the Tang court in China at that time was pre-dated by the probable introduction of go from Korea as early as 500 AD. Thus, there is nothing in his statement that refers to the 2nd or 3rd century AD, the period he is really interested in. Perhaps he had an agenda to dispute the apparent backwardness of the Japanese before so much culture was imported from China, or perhaps he would rather have go coming from China and not Korea.

In any case, according to the experts I asked, most of the historical matters in the other Himiko sections are probably correct. However, this is not the case for his attempt to equate early Japanese divination with 3,000 year-old Chinese Shang practices, and to link the two of them to go.

In his Preface, Shirakawa explains the reasons for his quest for the origins of go:

… as I gradually became acquainted with the philosophical issues of [go], I recklessly began to trace its history to its source. Since 1985 I have joined in several go expeditions [with a Japanese Cultural team] to China and, through these trips, I was able to advance my research. Finally I hypothesized that the first pattern of the go board was Xuan shi zhen qi*, described as a tool for divination in the great Chinese history books Historical Records in the closing years of the Shang Dynasty (11th Century BC). It was around the same time that the Book of Changes (*Yi Jing *also known in the West as* I Ching*), a textbook for divination and one of the five Confucian classics, was completed, so I could make a reasonable relationship between go, divination in ancient Chinese philosophy, and the Five Elements . . . but this is still a hypothesis and I look to the public for comments and criticisms.*

Accepting his invitation, I think there are many interesting things about the history of Chinese divination that he presents. This is a vast subject that is notoriously open to speculation and controversy because so little is known.

Especially tragic was the book burning orders of Emperor Qin Shi Huang in 213 BC, after he united all of the Warring States. Qin was fond of magic, however, so the important *Book of Changes* and perhaps other materials were saved. When archeological methods improve enough to convince the Chinese government to open up more of his massive tomb in Xian, a treasure trove of earlier literary materials may be revealed—that is, unless his library was still in the palace that was burned when mobs attacked the palace after the overthrow of the dynasty. There also may be further discoveries of later books that were lost in orthodox Confucian purges that lasted until 605 AD. This was partially because divination, especially about one's individual fate, has been generally regarded with suspicion by Chinese rulers.

Despite all this destruction, there is also a great deal that is known, and, while I appreciate Shirakawa's tremendous enthusiasm for go, what he wrote will mislead readers who are unfamiliar with what he discuses.

Another point to mention is that Shirakawa was originally writing for a Japanese audience who would be expected to have at least some background in Chinese divination techniques and history. However, the uninitiated Western reader is likely to have trouble,

since Shirakawa paid for the translation, and the translator was told to render his words ‘exactly.’ But what happens for both audiences is that he sows confusion because he doesn’t distinguish what is known from what is not known, and he often gets the facts wrong because he is not acquainted with current research. Thus, as mentioned, this review must labor to provide at least a beginners’ guide into the jungle of its subject matter.

Part II

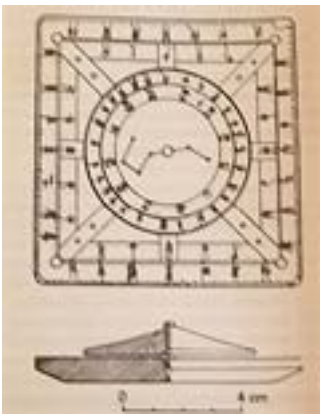
Shi Boards and Shang Stones

There are many problems with Shirakawa's linking pre-1000 BC Shang dynasty go with *xuan shi zhen qi*, beginning with the fact that it is not a tool, but a phrase describing a Han period divination technique developed from c. 200 BC-c. 200 AD.

More important, on pages 104-5, he mistranslates the passage as it appears in *Historical Records*. Sima Qian, the great Han period historian who wrote it, is speaking of market place diviners and Shirakawa renders the passage as ' . . . they spin the diviner's board and analyze the stones.'

Better known as *shi* boards, these bronze devices had round plates representing the sky that was spun over square plates, representing the earth. It is true that stones were thrown down and analyzed on another form of *shi* boards, but this did not happen until well after 0 AD, later in the Han period, and these were circular boards and the stones were not go stones. As illustrated by the metamorphosis of *shi* boards into the compass-using geomancy boards—see http://www.valdostamuseum.org/hamsmith/LoPan.html for an example of their final development—the types of *shi* boards that Shirakawa refers to never had anything remotely like a go grid on them. Instead, they had the Eight Directions, as in the example below, or hexagrams carved into the bottom, while the top showed the Big Dipper.

*And the simplest reason that they are not connected was that go was played before they came into use, since the specific character for go (*yi*) first appears in the Confucian writings of the late 4th and early-middle 3rd centuries BC (see Appendix V).



Drawing of an early shi *board. Note that Figure 2 of the Field article at http://www.fengshuigate.com is only to illustrate the arrangement of the trigrams. Figure 5 is a teaching diagram and is not meant to be an actual 'cosmograph,' as Field terms the devices.*

That they were not Shang devices or descendents of Shang devices, and Shirakawa's distortions of their operation, and their unrelatedness to go, will be demonstrated later, but the question of whether go could have come from other types of Chinese divination lingered on in my mind until I had the opportunity to do the research for this essay.

There were other divination boards that Schuyler Cammann discussed briefly in his Dualism article, but without ever suggesting that they became games. One 4th century BC form resembled the game board for *liu bo*, an early dice game that was passionately played by even the gods. Probably governed by the throw of counting sticks, divination pieces were moved around their so-called 'TLV patterns.' This was the same design that was used on the backs of Han mirrors and they look nothing like the grid of a go board. (For an example, see http://history.chess.free.fr/liubo.htm although the author's proposed connection between *liu bo* and chess is purely imaginative). This, too, was used after go was being played.

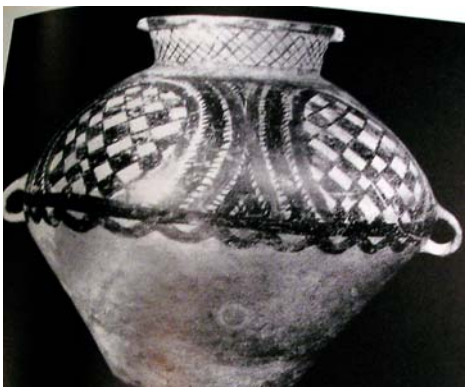
Cammann also mentions another practice that, according to Chang Heng, a noted first century AD Han mathematician, was 'very old by his time.' Pebbles were moved around the *Luo Shu* magic square in 'Nine Hall Divination.' However, as will be discussed later, the first mention of this kind of divination also only dates from the 4th

century BC, after the literature had already indicated that go was being played.

If a major game like go had been generated from one of these divination boards in that time period, no doubt someone would have mentioned it, and, in fact, Han books that list many other forms of divination do not mention any games developing from them, either.

There is only one other candidate that could cast a doubt on the idea that the origins of go are lost forever in the fog of ancient times, and Shirakawa tries to employ it. This is the ancient 3x3 magic square, upon which Nine Hall Divination—better known as Nine Star Divination—was built. I will explore what he has to say about this, but first, to put things into perspective for the rest of this article, and for Appendix IV that follows, a short review of what I have been writing about is necessary, since I agree with Shirakawa, but for very different reasons, that go, or proto-go, could be as old as the Shang.

Leaving out many details that were developed in the previous articles, and will be added to in Appendix IV, I think it is simply more logical to think that go was accidentally 'discovered' as one of many pebble games that the Chinese have developed over the course of history and still actively play. As I tried to show in my two books, *Go! More Than a Game* and *Go Basics* (Tuttle 2005-6), the simplicity of its surrounding principle, that imitates Chinese hunting and techniques for the last 7000 years, naturally evolves from one-eyed to two-eyed go.



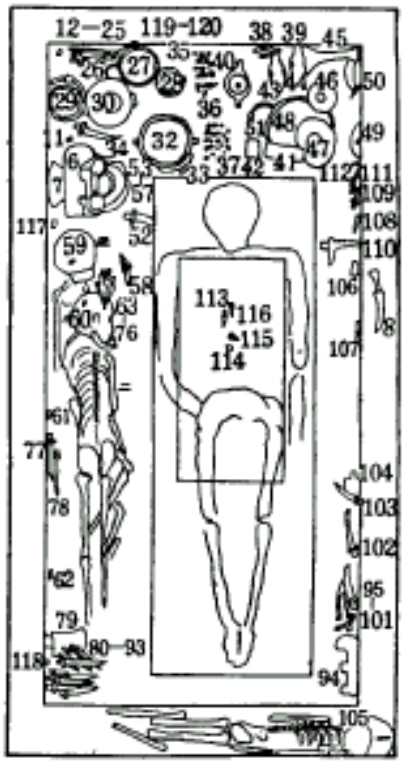
At one time, I, too, thought that the go grid might have been inspired by the design of magic squares and scratched out on the ground or drawn on wood or stone, but, as will be seen later, that most likely did not happen. However, the first go game could have

been played with beans, stones or shells on a shard of a 3-5,000 year old ‘net patterned’ Yangshao pot.

In any case, as discussed in the main text, this discovery could have been seen as a significant advance in human consciousness and memorialized in some versions of the Yao/Shun/Dan zhu myths, many of which were later changed or invented by Han historians.

I also noted go’s more probable early earth-symbolization, with its stones blocking and releasing *qi* energy running along the lines, rather like the early control of water and the development of rice paddies. This and other ancestor-worship and Daoist influences have often been forgotten by more recent players and commentators, who are used to thinking about stars and other sky objects.

These were rather radical ideas when I proposed them in *Go World* more than a decade ago. Since then, I learned from Tang Ji Gen, the go-playing chief archeologist at Anyang, the former Shang capitol, that small piles of what he and most Chinese sinologists think are ‘game stones’ were found in many of the tombs. Shirakawa and his Chinese advisors seem to be ignorant of these discoveries, however, which appeared in the *China Archeological Journal* in 1986.



Tomb 1713

The small piles of 'game-stones'(No. 37) in Shang tombs were always placed near the head or by right shoulder, perhaps to be near the brain or the 'game-playing' hand. Other similarly-aged piles of small stones—shaped like modern Chinese go stones—have been found on the ground in Siberia.

Another development came from the Marxian Dutch anthropologist Wim Van Binsbergen who, as discussed in Appendix II, recently theorized about the origins of mancala in Africa in similar terms. Against the mainstream of current anthropological thought, he concluded that strategic games were a necessary component of the shift from clan-based Paleolithic to empire-based Neolithic social organizations, and that they had a parallel development to divination rather than a direct evolution.

We agreed that the operations and goals performed by board diviners and game players seem to be radically different, and that strategic board games, besides being outright 'fun,' would have played an important role in preparing the minds of early humanity for demands of the new age. This point of view made even more sense out of some of the intriguing details of the Yao 'flood-control' myths, and also the progress and perhaps even history of go games that change from hunting stones to surrounding 'territory.'

Moreover, strategic games' distinction from the operations of diviners is even more apparent in China, because, unlike in Africa, the boards are quite different, as this essay hopes to demonstrate.

The *Xuan Xuan Qi Jing*

On pages 7-10 of *A Journey*, the reason for some of Shirakawa's historical problems become clearer, because he says he is following Go Seigen's commentary on *The Mysterious and Profound Go Sutra*, a famous book of go problems. One of its three prefaces was a short, esoteric defense of go that was written to persuade doubting *literati* and their Mongol rulers of the game's intrinsic value, although go was much more accepted than in the Han period. As was common by then, the writer, Yu Ji, blended principles drawn from neo-Confucianism, 'neo-Daoism,' the Chinese form of Buddhism and what was thought at the time to be history—a

delightful, mystical amalgam that had started to come together in Song period *literati* circles c. 1000.

The problem is that Shirakawa does not provide a translation of what he is discussing and, as we shall see, he distorts much of it and presents it as if it were actual history. Neither he nor Go Seigen—arguably the greatest go player of all time, but also well-known in Japan as a follower (or dupe) of a mystical cult with Shinto overtones—are historians.

*A real go historian, Englishman John Fairbairn, generously corrected my presentation in the original posting of this Appendix and forwarded a translation, which is available on his GoGod CD (see the Bibliography for details) and will appear in a forth-coming book from Yutopian.

To paraphrase *The Preface to Xuan Xuan Qi Jing* by Yu Ji, the 'Old Man of the Shao Hut' or 'Temple of Shao,' he disagrees with early Han writers who claimed that the rebellious and profligate sons of Yao and Shun, Dan Zhu and Shang Jun, were led astray because their fathers taught them go. Instead, he claims that go is better than any other 'common accomplishments' for understanding not only the Confucian ethic of practical service, but *all* the workings and manifestations of *yin* and *yang* under the roundness of Heaven and on the squareness of Earth.

Yu Ji then relates how he was once the top player of a group who were invited to serve at the Emperor's side around 1330 AD. One day, the Emperor asked him if he agreed with what Yu Yuan, a long-deceased ancestor, told the Emperor Ming Di about go nearly a thousand years before from 465-472 AD. Yu Yuan had talked of Yao and Shun and slightly twisted Mencius's and Confucius's words about go into words of approval (Confucius: playing go is better than doing nothing; Mencius: go is an art that cannot be mastered without study and hard work—see Appendix V). Moreover, Yu Yuan had declared that running a go game was like running a government or an army. Yu Ji's Emperor listened and then had him write an inscription on his go set which Fairbairn translates and adds a comment:

'Encircling the heavens and delineating the earth, secures victory and protects virtue.' [Dian & Zhu have it that he wrote four characters: heaven, earth, move, static; movement symbolises controlling victory, static symbolises maintaining virtue.]

Then Yu Ji talks of how he retired and how go players came to his house and told him of two good players from the Song dynasty, Chancellor Yuan Xiangong's grandsons, Yan Tianzhang and his townsman Yan Defu, who had collected books which contained games, strategies, problems and anecdotes. They had drawn diagrams which explained and classified everything and made one book of it all, called *Xuan Xuan Ji* (*Collection of the Dark and Mysterious*).

In a somewhat rambling fashion, Yu Ji then talked of how this book was the work of a lifetime because, unlike most go books, which deal with 'trifling skills,' it penetrates all the deep wonders and mysteries of go. These are no common mysteries, and mastering go as some maintain, is not a 'perverse and unreasonable skill,' but rather, is a mastering of the *Dao*.

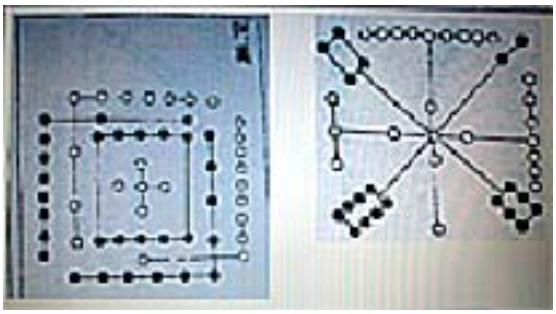
Long ago, did not Lu [Jiuyuan], the master of Xiangshan, [a famous 12th century occult literati] while watching a game of weiqi, say: 'The Yellow River Diagram and Luo Record truly lie therein. Yao and Shun's invention [of go] surely did not happen by chance!'

The *He Tu* and the *Luo Shu* River Maps

On pages 7-8, Shirakawa begins his discussion of the *Sutra* with a slight twist of the logic:

*A more notable part in the introduction [of the Sutra is where] . . . Lu Xiangshan said that when he saw a game of go, the Yellow River Map (*He Tu*) and Luo River Markings (*Luo Shu*) surely exist in go. Therefore, there is some substance to the story that Yao and Shun invented go.'*

Later in the book, Shirakawa gives Lu's self-proclaimed 'credentials' for making such a statement: 'The universe is equal to my mind, my mind is equal to the universe.'



7
2
(5)
8 3 5 4 9
(5)
1
6

4 9 2
3 5 7
8 1 6

On the left is the He Tu*—the 'River Chart' or 'Dragon Writing'—commonly known in English as the 'Yellow River Map.' The two extra 5's in the center of are mystical additions that will be commented on below. On the right is the magic square of the* Luo Shu*—'Luo River Writing' or 'Turtle Writing'—usually called the 'Luo River Map.'*

The two River Maps were alleged to be 5000 years old. The cross-shaped one was said to have appeared on the back of a dragon-horse that emerged from the Yellow River. Its pattern was popularly thought to have inspired the creation of the Eight Trigrams, which may have later developed into one arrangement of the 64 Hexagrams.

The second Map supposedly rose from the Luo River on the back of a giant tortoise, and was said to be a magic square that added up in all directions to 15.

As will be discussed later, Schuyler Cammann showed why these stories were probably later additions to give antiquity to two systems developed by separate philosophical schools, sometime in the Zhou or Warring States periods, and that much about the stories and their associations is probably false.

Shirakawa continues:

The Mysterious and Profound Go Sutra *explains that go is strongly connected with* Book of Changes*, the foundation of the Nine Chinese Classics, and it is also the source of all Chinese thought.*

Previously, I could not clearly understand what this description meant, but, after my trips to China, reading Book of Changes*, and listening to Go Seigen, I realized that the Yellow River Map and the Luo River Markings were the sacred diagrams that had become the basis of divination and that they were related to go. Moreover, the legend of Yao and Shun suddenly became crystal clear.*

On page 60, he adds:

When I visited Go Seigen's home . . . I looked at the [Yellow River Map] diagram for the first time. I knew intuitively that somehow it was like a go board because of its black and white knots, square shaped lines that indicated heaven and earth, and the four directions, and the mysterious arrangement of numbers. Listening to [Go's] explanation, I felt as if ancient Chinese culture was breathing in the diagram and the go board was associated with it.

. . . the points, lines and circles [on the Maps] were the basic signs that the ancient people used when they recorded something by tying knots on rope. The signs were either black or white, namely, yin *and* yang*; go is also expressed using these signs.*

This is a thesis that Shirakawa will return to again and again, as if it were proven fact, but there is no evidence that such a connection existed. In fact, as John Fairbairn wrote me:

**The Preface [to the* Sutra*] makes no extravagant claims about the* Yi Jing*. It does not even mention it. The only reference is indirect: "Now, being proficient in the mysteries of the study [of weiqi] can be likened to Lao Zi's* Gateway to all Marvels *or Yang Xiong's* Measure of the Great Changes*.*

Moreover, in his enthusiasm, Shirakawa does not discuss a number of things that are well-known about the Maps.

They were not mentioned by name until the Warring States period in the 4th century BC, just before the words, *yin* ('shade') and *yang* ('sunshine') developed from the original Shang dichotomies of male-female, active-passive and sun-moon, etc. Also, the first reference to Nine Star Divination, which was based on the magic square and will be discussed later, is from that period, although the numbers and layout were not described until the late Han.

Like Nine Star Divination, the Maps were passed down from master to disciple in the oral traditions of esoteric Daoist cults, and probably written on paper which disintegrated or was destroyed for mystical or commercial reasons. Though mentioned often in the Han, the Maps were first made public in the late 10th century AD, probably because they had declined in importance as secret Daoist lore. Neither Map in this form ever became a popular icon, unlike the newly emerging, double-comma-shaped *yin-yang* sign, and later, as we shall see, they were used only by occult, Daoist-oriented *literati*. (See Michael Winn's paper at http://www.healingtaousa.com/pdf/dao_inner_alchemy.pdf for the extent that the Maps still permeate secret Daoist universal mystic thinking).

Moreover, after the decline of the Tang dynasty, beginning about 1000 AD, the Song was a time of intense interest in antiquities, so forgers were kept busy turning out artifacts and writings of earlier periods (such as the 'oldest' game record) to satisfy a steady demand. Thus, it is generally thought that the pre-historic knot counting system was attached to give the Maps an air of authenticity, perhaps even long before the Song, although there are no records of

this. (Cammann says it is ‘barely possible’ that Xue Yue, a first AD century Han mathematician, was referring to this way of depicting the Maps. However, he says that Xue used the words *chu suan*—‘bead calculation’—and not the characters for ‘knot tying.’)

In any case, as will be discussed in the next section, Shirakawa does not seem to know that the River Maps ‘discovered’ in the early Song were probably quite different from the original forms that may have developed in the Shang period. As will be seen, if these early versions were portrayed by knots or beads, their inversions, eversions and reversals would probably have made little sense.

In other words, although Cammann does not put the idea forward, the appearance of black and white go stone-like circles on the Maps’ could conceivably suggest a line of transmission exactly opposite to Shirakawa’s proposal—that to heighten their mystery and allure, the Maps were drawn to resemble go stones.

*However, Fairbairn cautions that the Chinese used black and white circles in their star maps:

The earliest surviving Chinese star map from the Dunhuang Caves.

Part III

Schuyler Cammann's History of Chinese Magic Squares

Shirakawa doesn't stop with his theories about the *He Tu* and the *Luo Shu* Maps. On page 66, he suggests that,

If go really has a deep relationship to divination, as Ban Gu [one of the few Han Confucian public defenders of go] and other scholars have suggested, it is also presumed to be connected with the oracle bones.

The construction of this sentence is tricky and misleading and it is only Shirakawa who could have been doing the presuming. In trying to link go with oracle bones and the Maps (and, as we will see) the early history of the trigrams and the hexagrams and the *Book of Changes*, he must brush over a complex history, much of which he ignores or misuses to suit his agenda.

To illustrate how his theories might be as disconnected as his theories regarding go and *shi* boards, this section will look at some of Cammann's vast work on these subjects. I think it will become more obvious that the concerns of diviners from the Shang period onward are far apart from the concerns of go players, no matter when they began playing.

Schuyler Cammann spent a great deal of time researching the history of non-literary images, which he regards as important keys to some of the puzzles of early Chinese culture. He thought that the *He Tu* Yellow River Map and the *Luo Shu* magic square were two of the most important, in part because they can give insight into the history and development of the trigram and hexagram systems.

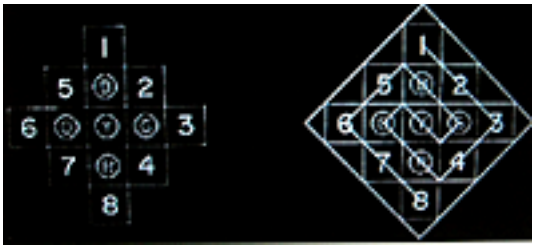
Cammann's is about the only attempt to 'reverse-engineer' (the term is mine) the final forms to see how they might have looked originally. Unfortunately, the vast scope of his observations on ancient China never turned to go, but, in any case, in no way do their appearances and development seem to suggest go boards or thoughts about go boards.

Cammann cautions that he was forced to work from hints and logic, and that much may never be fully known because of the purges in Chinese history. Nevertheless, he was able to piece together elements of that development.

*It is important to note that for the purpose of this essay, whether his details prove to be right or not is unimportant. For example, he argues vociferously against Hellmut Wilhelm's theory that the hexagrams were invented before the trigrams. However, those arguments are complex and will ultimately be determined by what comes out of the ground in the future, so the focus here is on how the concepts of magic squares and go veer off in two directions, thus giving ammunition to the idea that divination and strategic games may have had a parallel and not a consecutive development.

The Shang began by using animal scapulae that were heated until cracks developed that could be 'read.' Then they switched to turtles because the empty shells naturally suggested the idea of a rounded sky overarching a flat earth—an idea that would be attractive to people living on the great central plains of China. Once separated from the top shell, the plastron was light in color so the cracks made by applying heat were easy to read. They were also flat and could be easily stored. .

It is significant that the top turtle shells symbolized the Heavens. Like the one on whose back the *Luo Shu* was inscribed, there are 13 plates in the center (five vertebrals flanked by 2 sets of four costals), and these are surrounded by 24 marginals. This would suggest the 24 fortnightly divisions of the Shang year (whose names are aspects of the weather) surrounding their 12 month calendar plus an intercalary.

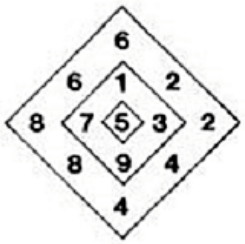


The Meander Diagrams found in many different Ice Age European and Siberian Paleolithic cultures, carbon-dated as early as

33,000 BC. Musician-scholar Bart Jordan claims such complex geometrical figures required mathematical abilities to construct. He posits five colors (red-green-blue-orange or white-yellow for five planets) and eight numbers in pairs that add up to 9 were maps of planetary-musical relationships. These diagrams may have been the first human calendars.

Diagrams from Jordan, 'Ice Age Art and Science,' Parabola*, 1978, Vol. 3.*

The text is from page 14 of Michael Winn's Internet article at [*http://www.healingtaousa.com/pdf/dao_inner_alchemy.pdf*](http://www.healingtaousa.com/pdf/dao_inner_alchemy.pdf)



Based on the 'Meander Diagrams' of the Paleolithic Age, along with the congruity of *He Tu* turtle shells, Cammann proposed that the beginnings of the *Luo Shu* could be seen on the inside of a 13-number diamond, with the diagonals adding up to 15, and the directional horizontal axis and vertical axis adding up to 25 (5 x 5).

This would not have been a calendar but it would have been linked with astronomy, and there is some archeological evidence of Shang contacts with Babylon, where this sacred-number diamond has been found inside temples. Also, Cammann pointed out that the numbers would be encased in small circles, lesser diamonds or perhaps the hexagons commonly used to depict turtle scales—it would not have been on a grid.

A Shang turtle design and part of a Tao Tieh *(pinyin* Tao Tie *) mask*

From The Great Bronze Age of China*, Wen Fong (Ed.), The Metropolitan Museum of New York, Knopf 1980*

The diamond shape as a single object appears rarely in Shang art and when it does, there seems to be some ritual significance. However, as illustrated above, the idea of similar repeated motifs-within-motifs appears quite frequently.

Moreover, imitating the Meander Diagrams and, as will be discussed later, anticipating a popular Han god's nightly 'stroll' from the celestial North Pole through the eight 'halls' of his 'palace,' a magical 'tour' could be taken by starting at 1 and moving around and down to 4, then returning up through 5 to 6 and completing at 9. This suggests an extremely balanced design that is reminiscent of the masks on Shang bronzes. (For further examples, see: http://faculty.sxu.edu/~bathgate/gallery/shang/shang.html and the JSTOR link on page 10 of http://links.jstor.org/sici?sici=00261521(1973%2F1974)2%3A32%3A2%3C231%3ATAOAC%3E2.0.CO%3B2-2

Cammann doesn't mention it, but there seems to be an additional 'tour' moving on the outside with 2-4 and up through the 'pole' to 6-8. Perhaps significantly, he says these patterns resemble the movements of snakes, with which turtles have been associated in China since antiquity.

To understand later developments in both history and Shirakawa's book, a short background of Chinese mathematics is given.

The Shang first used a five-numbered quinary system, probably based on finger counting. Thus, 5 became important because from 1, 2, 3, 4, 5, the next numbers, 5 + 1 = 6, 5 + 2 = 7, 5 + 3 = 8, 5 + 4 = 9 can be 'generated' and 'completed' with 5 + 5 =10. Thus, the Shang became the first society to use a denary counting system, with integers denominating higher multiples of 10.

Considering the highly developed sense of balance and opposition, another reason that 5 was the most important number in early Chinese proto-*yin-yang* thought was because it was a 'hidden,' androgynous number. Considering human bodies, 2 is naturally a female number and is *yin*. While 1 is the natural male *yang* number, it was co-opted later to become the 'Beginning of All Things,' as will be discussed later. So 3, the first 'waxing' of *yang*, is the primary male number. Thus, 2 + 3 = 5.

Furthermore, in Cammann's proposed diagram, 5 is agreeably surrounded by number pairs that half to 5. Also, there is a diamond of *yang* and then a diamond of *yin*, suggesting their inner workings in the universe. 5 also connects the four *yin* numbers at the corners, (since the square earth is *yin*), and the four directional *yang* numbers on the vertical and horizontal axes. However, as will be demonstrated later, Chinese *yin-yang* thinking in regard to magic squares is not as simple as it first seems.

The central position of 5 recalls the flattened doughnut-shaped *pi*, some of the earliest jade artifacts that were considered 'maps' of the heavens, with a center 'gateway' to the heavens above (see http://w3.salemstate.edu/~ckramer/Pi.html for an example).

5 is also in the 'pole' position. In versions of the Chinese universe that came down with shamanism, a pole which the shaman could climb up or down in trances connected the three worlds of Heaven, Earth and the Underworld, and the gods, man and the dead.

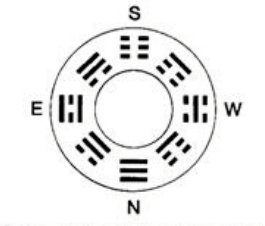
And, as Shirakawa keeps reminding us, in the *Great Commentary* of the *Book of Changes*, the Great Pole divided into two, *yin* as a broken bar and *yang* as a solid one, Then the two multiplied into four 'images' with four combinations of broken and solid bars, and the four became the triple-layered Eight Trigrams. This will become clearer after the discussion below, when Cammann thought the Maps acquire their celestial trigrams.

On the top of the 'Turtle shell-diamond,' which would have symbolized the heavens as opposed to the square earth of the plastron, there are many other qualities inherent in this arrangement

of the 13 numbers. For example, Cammann details how they tie into the partially-matriarchal Shang system of hours, days, weeks, menstrual cycles, gestation periods, ten- and fifteen-day cycles, and the synodic or phase period of Venus—the third brightest object in the sky.

He cautions that the 13-numbered figure may never be found because it would have been for the exclusive use of the king-priests that ruled Shang society. Also, it would not have been buried with them because of the danger that its secrets might be revealed and magically used against them, as seems to have occurred with the re-arranging of the Eight Trigrams upon the fall of the Shang in 1046 or 1027 BC.

Cammann suggests that the trigrams probably came into use as a result of the Shang method for keeping track of numbers. They used counting sticks and, because these can be broken in two, presumably this was the inspiration for the sets of three, five and six long- and divided-marks that appear on oracle bones. Much like recording the results of Five Coin Divination tosses, which is still used today, whole sticks and broken sticks could represent ‘yes’ and ‘no.’ As these early ‘trigrams’ grew into eight, the numbers 1-8 also appeared on the bones.



It is unknown how the trigrams were first organized, but this is a good guess, Cammann thinks, since it is so logical and simple and explains so much of what was to come.

Traditionally, there have always been Eight Directions’ and Eight Divisions of the year because the Chinese count in eights like we count in dozens. Thus, in what Cammann calls a space-time ‘mandela,’ the ‘Mother’ with three *yin* broken-stick bars must have been put in the South at the top, and the ‘Father’ with three solid lines would have been put into the North at the bottom. This is because, for the semi-matriarchical Shang, the south and summer was warm and

fertile; while north and winter was when the ground froze and chariots could be driven off to war.

The six mixed-trigrams organized in-between suggested a ‘Family.’ A counter-clockwise ‘time tour’ of the ‘seniorities’ of three ‘Daughters’ and three ‘Sons’ would result in a waxing and waning of the strengths of *yin* and *yang* as the year progressed. On the West side, which belonged to Spring and the moon, was the Second Daughter, and the Second Son represented the East, autumn and the sun. In various ways, the Trigrams also represented the winds, thunder, seas, mountains and etc.

After this came at least three shifts in the order of the trigrams, so Cammann postulated that the *Luo Shu* went through similar changes, and had to be descended from his 13-number magic diagram.

When the Shang were overthrown by the more primitive Zhou, the conquerors may not have understood the number diagram. Cammann postulates that it was as if they tried, to use my term, ‘denature’ these symbols and strip them of their powers.

Following what was done to the trigrams, which will be discussed below, he proposed that these reversals in the diamond figure took place where the top, bottom, and sides and hence genders were reversed by the strongly patriarchal Zhou, as the intensified feudal in-fighting led to male-domination. This is similar to the Zhou denigration of the owl, which had previously served as the badge of the Shang royal clan.

4
4 9 8
2 3 5 7 8
2 1 6
6

Next, he thinks that two separate schools or cults of rival scholars began using different parts of the figure to organize their philosophies.

4 9 8
3 5 7
2 1 6

If the first Luo Shu *looked like this . . .*

4
9
2 3 5 7 8
1
6

. . . then the first He Tu *Yellow River Map might have looked like this after the numbers were peeled off with a swastika-like movement.*

Because of the elaborate rationalizations of the stories of the two Maps, and the fact that they had separated apart by the Warring States period without any tradition of ever being united, Cammann suggested that they must have been separated for centuries by then.

Originally, the square *Luo Shu* was associated with the earth and the cross-like *He Tu* with the sky, but later, with the development of a Trigram-based 'Celestial Plan,' the *He Tu* was associated with the Earthly *yin* Four Directions. Thus, they probably came from different States, before the Qin united China in 221 BC and erased the memory of their histories with their book burnings and further re-arrangements of the Maps.

Looking first at the cross-like pattern of the *He Tu*, it would seem unbalanced, and the 8 and 2 would have been transposed; perhaps this was inspired by the shift in the *Luo Shu*, Similarly, the 2 would have moved inside the 7 and apparently later, perhaps connected with a re-arrangement of the Five Elements, (to be discussed below), the 9 and 4 would have been reversed at the top.

North

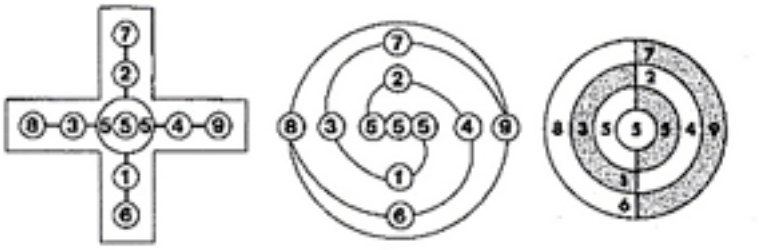
9
4
West **8 3 5 2 7** East
1
6

South

The result is that 9 = 5 + 4, 8 = 5 + 3, 7 = 5 + 2 and 6 = 5 + 1, which is true of the final *He Tu*, which was eventually turned about to take into account that West on the Map is *yang* and home of the sun and therefore had to have an odd number, while the East is *yin* and needed an even number.

Later, with the development of Song mysticism, it was felt that the aforementioned 'hidden number 5' at the center had to be taken into account. This requires some explanation because Shirakawa gives none.

As mentioned, until the Song dynasty began using the abacus, the Chinese employed counting sticks to keep track of numbers used in transactions and calculations. Their memory survives in the characters for the first three numerals (**– = ≡**), the character for the number five (**X**) and the character for the number ten (**+**). Thus, there are 'hidden' fives in the center (note the **X** pattern of the center of the *Luo Shu* diagram). But one of these 5s is *yang* and one *yin*, thus the added 10 is halved and 5 = 2 (*yang*) + 3 (*yin*).



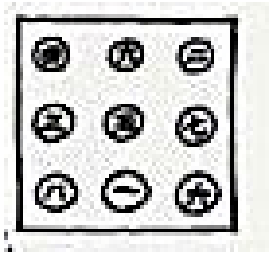
The final form of the He Tu *and two* yin-yang *arrangements derived from it.*

This result allowed the Song literati to make public, for the first time, the two-comma shaped *yin-yang*, Tai Ji, Great Pole sign, by drawing a line beginning with *yang* 1 and ending with 9, and then a second *yin* line beginning with 2 and ending with 8. This is the meaning of the mysteriously un-annotated diagram on page 146 of Shirakawa's book. Black was then assigned to the *yin* area and white to the *yang*, though sometimes now, black is given to *yang* because color is 'positive' and 'active.'

As for the presumably older group who preferred the *Luo Shu* and linked it to the trigrams (which will be discussed later, when Go Seigen's and Shirakawa's use of Nine Star Divination is discussed), all they needed for a truly magical square was to transpose the 8 and 2 at the corners. Their 'hidden 10' was in the center, too, but it could only be seen in meditation.

4 9 2
3 5 7
8 1 6

These numbers and their positions in this and the other eight possible combinations, especially after they were combined with Five Phase (or Five Element) theories, as mentioned, came to represent various rivers, mountains, parts of the body, tastes and many other aspects of old Chinese culture. And again, what does all this have to do with the origins of the game of go? Probably not much, especially since traditional Chinese magic squares did not use grids, unlike those of India, the Mid-East and Europe.



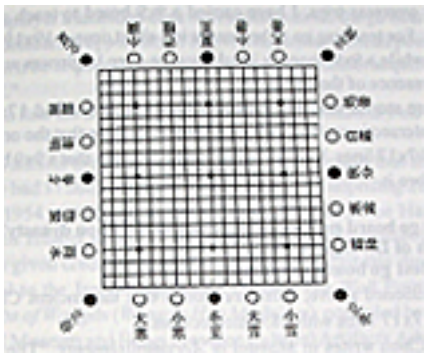
As mentioned, Nine Star Divination was derived from this magic square and does use a grid, but apparently it was only used since the 4th century BC—more than half a millenium after the fall of the Shang.

Nathan Sivin, the great Sinologist at the University of Pennsylvania, (whose office was across the hall from Cammann's), neatly summed up the situation in a private communication: 'I can't see any connection between magic squares and *wei qi* or *xiang qi* [Chinese chess]. If either had numbers on the pieces, that would be a different story.'

Part IV

Calendar Theories and Board Sizes

Returning to Shirakawa's book, in the Introduction on page 9, he continues to follow the *Sutra*'s explanation of the 'meaning' of 361 intersections of the 19x19 board. He says that Go Seigen 'casually remarked, "In ancient times, one year was made up of 360 days,"' and that the extra day 'represents the Supreme Pole of divination, the essence that generates everything.' Shirakawa then writes that the *Sutra* discusses how the four sections of the board divide into the four seasons and how the 72 intersections on the sides correspond to the 72 weeks of the year. Later, on page 123, he gives this illustration of what Go Seigen explained was the correspondence of the Four Seasons with the four sides of the 19x19 board:



'This convinced me,' says Shirakawa, 'of the truth of the theory that the go board was used as a calendar before a written language had been developed in ancient China.'

Later, on page 81, he quotes from a mystical volume of a book from the 16th century, the *Shi Qing Lu*: 'The go board used to be a tool for the calendar, called *rizhipan*. It was nearly [sic] a 21x21 board, surrounded by double lines of two-color crystals.'

As discussed in the *Origins* article, the idea that go boards were originally calendars is old and highly unproven, and it is not until page 133 that it becomes clear where Shirakawa looked for support of this idea.

The Soul of Black and White was a television show that became a book, whose articles were 'compiled by the staff of Beijing

Television, the Chinese *Weiqi* Center and the China-Japan *Weiqi* Friendship Center.' In it, persons whom Shirakawa doesn't identify wrote:

The profundities of the theory of go and the characteristics of inscriptions written with characters have a close connection to the 19x19 board. Based on this, we would like to set up the following daring hypothesis. The primary form of the go board was a 19x19 board, and after the changes to a 13x13 board, then to a 17x17 board, it returned to a 19x19 form in the Sui period [580-618 AD]. We consider that the changes of the number of lines before its return were just a historical transition of the go board.

This is imaginary history—all the earliest boards and descriptions of boards are 17x17. Their reason for saying that it turned into 19x19 as early as the Sui will be questioned below, since there is a theory that Shirakawa mentions (and I do, too) that the extra two lines were added in the middle of the boards to conform with changes in astrology and/or the length of the year during the Tang dynasty, which followed the Sui.

In brief, the problem with calendar theories of the earliest go boards is that the numbers of 17x17 boards do not lend themselves to any known calculation system.

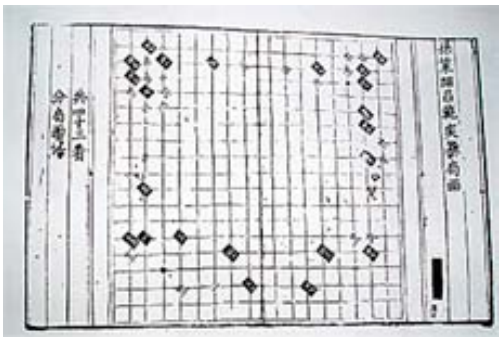
On page 10, Shirakawa wonders about the extra five days that would be needed to make up a full year with a 19x19 calendar, but concludes that, ' . . . this was probably of little concern for people living in ancient times.' However, on page 75, he notes that, ' . . . the Shang calculated almost correctly the number of days in a year (365.25),' and this is what archeologists have found.

On page 133, Shirakawa also quotes the authors of *The Soul of Black and White*, who have their own theory for the arrangement of 19x19 boards: ' . . . The four points that are adjacent to the center point represent a junction of the four seasons. Each of the four points corresponds to the end of a season as well as the beginning of the next season. There, when we add these four points and the center point (one day) to the 360 points, the total number of days is exactly 365.'

The Romance of the Three Kingdoms and a Sui Dynasty Board

To return to the Introduction, Shirakawa concludes it on page 10 by speaking of modern times and how go is connected with subjects like molecular biology, but this will be discussed at the end of this essay.

Then he begins Chapter One with commentary on the go-playing personalities of *The Romance of the Three Kingdoms*, bringing up, on page 26, the oldest game record, which was said to have been played between two of them. He makes much of the fact that the board diagram of the game—which comes from an 11th century AD Song dynasty book—has only five star points. He says these 'represent the five planets of old Chinese astrology.'



He also discusses a stone board with five star points found in what he calls an 'ancient tomb of the Sui period.'

Then, he carries on with this idea on page 78, where he quotes an 18th century paper prepared by some Japanese professional players and a certain 'man of literature.' They declared that Chinese rules specified pre-placing two black and two white stones on the 4-4 points, 'as well as on the center point'—something which Shirakawa

fails to show in any of his examples of old Chinese games and was certainly never written down as a rule. He also mentions a Chinese player who 'liked to play his first move in the center,' but that is hardly pre-placement.

Besides, Shirakawa tells us that Go Seigen thinks the game record is a forgery, [as do most other experts], because the *joseki* were too developed for the 3rd century AD. Another reason is that it is a 19x19 board and all descriptions of early board size discuss only 17x17 lines. It is also likely that other games, described from this era, some of which may have begun with a center play (which is a good play, after all), were also Song forgeries. In any case, the 'oldest game' does not begin in the center, either.

Moreover, Shirakawa should know better than to say that anything as late as the 6th century AD Sui dynasty is a reason for saying anything about 'ancient go.'

In *China Archeology and Art Digest,* Vol. 4, No. 4 (2002), an article by Song Li describes the 'star points' of this board, but gives the following reason for their existence:

. . . The board is incised with a grid of 19 lines running in both directions; at the corners where the external lines meet and at the center of the board are five small holes; these 'five stars' demonstrate that the base of the board was supported by five legs in a manner similar to some boards today.

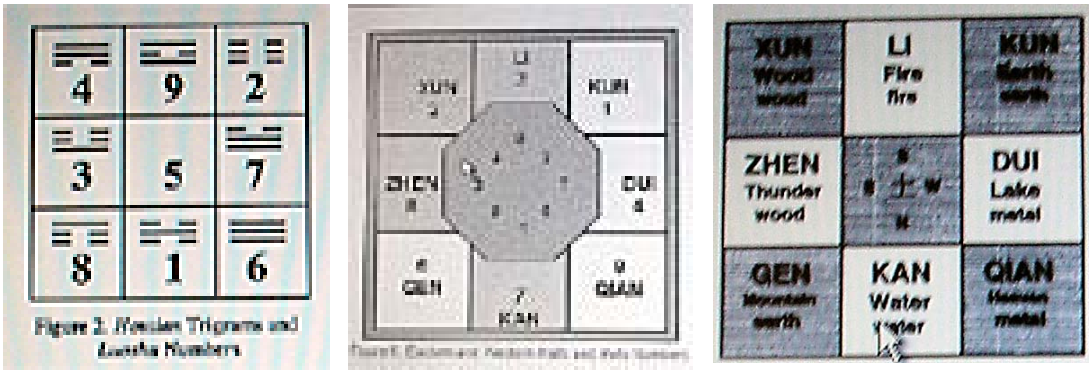
*This miniature board, which is only 10x10 cm, is also interesting because the 19th lines seem to be on the edge of the board and impossible to play on. This same configuration appears in the oldest go painting, which was found in the Dunhuang caves and dates from the Tang era (although the board is 16x17 lines, possibly because, like *ukio-e* prints in Japan, the artist may have not known how to play). However, John Fairbairn points out the same is true of the 8th century AD Nara board from Korea or China but its the stones are small enough to have been played there.

In any case, Shirakawa does not discuss this matter further because he is leading into the importance of the number 5 in Tekijoroku Kaisetsu's *Commentary on 'Shi Qing Lu.'*

Part V

The *Shi Qing Lu*, Nine Star Divination and Five Phase Theories

*The 16th century *Shi Qing Lu* was mostly go positions, but it had one highly mystical volume about go that followed up on the ideas of *The Sutra* by applying Nine Star Divination procedures to the 19x19 go board. This was done in order to find the 'Number of Go' and its 'Substance' and 'Function,' an admirable enterprise if one is interested in finding otherwise inexpressible qualities of go's harmony and beauty, as Go Seigen does. Unfortunately, he also tries to be scholarly and Shirakawa blindly follows along. With a great deal of enthusiasm, they proceed to use these concepts to start seeking clues about the source or sources of go, but, by making uninformed and misleading statements, they create an alluring atmosphere that distorts history.



Three of the many ways of organizing the Halls of the Palace used in Nine Star Divination.
From the Stephen Field article at http://www.fengshuigate.com

The subject of Nine Star Divination is vast and needs a long, accurate explanation, which, unfortunately for both Eastern and Western readers, Shirakawa does not provide.

At least since the 4th century BC, besides the two gods of Heaven and Earth, a third one called Tai Yi, 'The Great One' or 'Supreme Unity,' was felt to unite them. His home was beyond the

‘Sky Door’ or ‘Gateway’ that the hole of the ancient jade *pi* represented as being over the North Pole Star, around which the stars of Central China wheel as if on a pivot. Around the central, empty ‘Courtyard’ were the *Ba* (Eight) *Zhai*—Eight ‘Halls’ or ‘Mansions.’ During his stately ‘Tour,’ he would spend a year in each before moving on to the next.

The idea of a pole with surrounding accoutrements is universal (think of the May Pole, for example), and Cammann wrote an interesting paper on it, which is available at http://staff.bcc.edu/philosophy/cosCamm.htm

In terms of more earthly matters, to some, the arrangement suggested the early, square map of China, with its eight provinces surrounding a magic mountain. Mencius suggested eight fields of feudal peasants that supported a main house. There have also been analogies to an Ideal Ruler attended by his loyal subjects.

More practically, the layout of this Palace came to be used for determining individuals’ fates by the methods of Nine Star Divination, which superimposed onto it the *Luo Shu* magic square, the *Hou Tian* Latter Heaven sequence of the Eight Trigrams, the *He Tu* Yellow River Map, the Four and Eight Directions, the Four Seasons and the Five Elements (more correctly translated as the Five Phases or Five Agents). Complicated calculations were made on the board and compared to one’s year of birth, then numbers were ‘generated’ to find the correct Stars that would determine good or bad fortune and *feng shui*.

However, these were no ordinary stars and they had nothing to do with the star points on a go board, as Shirakawa implies. Seven were those of the Big Dipper and two were ‘hidden.’ Nor does applying divination procedures to go boards—especially 19x19 boards that did not come into use until the Sui or Tang dynasty—say much about the origins of the game, though, again, Shirakawa seems to think it does.

In order to try to understand the disconnection between this kind of divination and go, it is necessary to discuss the Nine Star Divination procedures, which the *Shi Qing Lu* so strangely uses.

In the passage from the Stephen Field article below, the *Hou Tian* sequence of trigrams referred to is usually translated as the ‘Post’ or ‘Later Heaven Sequence’ (as opposed to an ‘Earlier Heaven Sequence’) and is a trigram circle traditionally thought to be arranged

by King Wen Wang from the numbers of the *Luo Shu* magic square, while he was a prisoner of the Shang. (Wen's son went on to conquer the Shang in 1047 or 1026 BC). Wen is also supposed to have invented the arrangement of hexagrams that came to be used in the *Book of Changes*.

Shirakawa mistakenly adheres to the tradition that Shao Yong, a Song period scholar, rearranged the King Wen sequence and came up with the Earlier Heaven Sequence, one that he thought Fu Xi would have made, based on the arrangement of the *He Tu* Yellow River Map. This is the 'binary' arrangement of the hexagrams that is thought to have inspired, or at least resemble, Liebniz's scheme for binary arithmetic. However, this complex issue will be dealt with toward the end of this essay.

As will also be explained, the *Ba Gua* of the *He Tu* (Eight Trigram circle of the Yellow River Map) have no numbers connected with them, so in Nine Star Divination, *Luo Shu* magic square numbers were used. Field describes the elaborate procedure for determining individual destinies:

. . . A formula called the da you nian*, 'Great Roving Year' is the means by which number and trigram merge. First, the sequence of digits 1 through 9 is repeated 20 times to match three sixty-term,* ganzhi *cycles of 180 years called the* sanyuan*, 'Tri-epoch.' Since every year has a* ganzhi *designation, in the Tri-epoch everyone's year of birth has a digital correlate from 1 to 9. Each* luo *number has a unique trigram, derived from its* houtian *correlation, so when the Tri-epoch digit is equated with the* luo *number, each person has a trigram that corresponds to his/her natal year. This is called the* minggua*, or the natal trigram, and it identifies the character of cosmic* qi *present at the person's birth. Finally, the natal trigram is paired with each of the eight directional trigrams in the* houtian *sequence (called* zhaigua *or hall trigrams). Each of the eight* minggua *therefore has a corresponding eight* zhaigua*, and these eight groups of eight trigrams complete the* da you nian*. This complement of a natal trigram and its set of hall trigrams represents a metaphysical interaction between the individual's natal* qi *and the* qi *[or* feng shui*] of the environment that surrounds that individual [It is used, for example, to decide which direction to orient one's house or tomb]. This conjunction is essentially thought of as a transformation of the* minggua *into the* zhaigua *and vice-versa (called* biangua *or* bianyao*), and each*

transformation is capable of generating good or bad fortune for the individual. The auspice generated by the conjunction is known as jiuxing*, or the Nine Stars.*

For a simplified, interactive demonstration of Nine Star Divination which will make this ritual clearer, please go to: http://www.geocities.com/Athens/Delphi/9911/01software.html

In this divination process, Field goes on to explain, certain stars are favorable and certain others are not. Also, numbers are 'generated.' For example, 5—the number of Earth and the center of the Nine Palaces—becomes, as might be guessed, a very 'fortunate' outcome.

But that is not all there is to Nine Star Divination. Previously, Shirakawa talked about the 'history' of his 'five star points' on page 28:

The five star points on ancient go are derived from the two forces of the universe, namely Yin *and* Yang*, as well as the Five Elements. Go reflects the theory of* Yin *and* Yang *and the Five Elements and the center point on the board is equivalent to the Supreme Pole.*

The Five Phases was a mystical explanation of changes in the universe, said to be developed by the late Warring States *yin-yang* theorist Zou Yan (305-240? BC), although Cammann says it undoubtedly comes from an earlier tradition.

The Five Phases are not really 'elements,' but rather astrological forces emanating from the five known planets. Arranged in different patterns over time, Saturn influenced Earth and hence was called the 'Earth Star', Jupiter was the 'Wood Star', Venus, the 'Metal Star', Mars, the 'Fire Star' and Mercury, the 'Water Star.' The Phases can also be thought of as manifesting the qualities of those forces by thinking of Water as 'Falling,' Fire as 'Rising,' Wood as 'Expanding' (as in the growth of a tree), Metal as 'Being Inward,' and Earth as 'Steadiness.'

Zuo Yan, (who left no writings), or those he followed, started by suggesting that the elements can 'conquer' each other: Earth can dam Water (consider, for example, the silting up of the Yellow River); Water can quench Fire; Fire can melt Metal, Metal can cut Wood; and Wood can sap Earth (when growing).

But it is more complicated then that.

At http://www.healingtaousa.com/pdf/dao_inner_alchemy.pdf Michael Winn goes into a deep discussion of Daoist ideas about the Five Phases' connections with music and other aspects of the universe. For example, the planets were associated with numbers in the magic square. In descending order of the distance of their orbits from the sun (and hence the length of their viewed orbits from earth). Thus, Saturn-5 is in the center, Jupiter-3 in the left-East side, Mars-9 is in top-South, Venus-7 in the right-West side, and Mercury-1 in the bottom-North.

South/Summer

	4 9 2	
East/Spring	**3 5 7**	West/Fall
	8 1 6	

North/Winter

But the concept of numbers is different in China than in the West. Li Jianmin writes in 'An Introduction to the Occult Arts in China' at http://saturn.ihp.sinica.edu.tw/~bencao/0309.htm

. . . In ancient times, 'shu' ('numbers') were considered a part of nature, and shushu (literally 'art of numbers') was perceived as a system of natural laws governing the cosmos. Occult arts included both techniques and theories for understanding the relationship between human beings and the cosmos. In other words, shushu was both a traditional Chinese view of the universe and a variety of divination techniques based on this view. Thus, 'shu' has the meaning of both 'numbers' and 'calculation.' Because of the significance attributed to numbers, shushu is not synonymous with mathematics and implies more than numerology. For instance, in shushu, numbers were perceived as either ominous or auspicious, and can therefore represent fate. Hence, to master 'numbers' was to both explicate the past and envision the future . . . shushu eventually came to include the study of various sorts of correspondences, including concepts related to time and space.

. . . As more and more newly-excavated materials reveal, rather than coming from any one figure [such as Zuo Yan], the notions of

yinyang and the Five Phases originated from a view of the universe that had been extracted from the practice of astronomy, calendrical calculations, and turtle-shell divination. The major Chinese occult arts took shape during the three hundred years from the Warring States period to the Western Han.

When applied to the *Luo Shu* magic square diagram used in Nine Star Divination, Cammann thinks that Zuo or the framers of the system might have had the agricultural year in mind. The 5 of the center was Earth, the central focus of an agricultural nation, and it could be added to all of the phases in a manner reminiscent of early Shang counting practices.

Thus, the Agents helped to create the seasons, so that, when *yang* was first waxing in the Spring, 3 and 5 + 3 = 8 were assigned to Wood. As summer approached, 4 and 5 + 4 = 9 were given to Metal, perhaps referring to the use of agricultural tools. The fall was when the fields were burned, so Fire 2 and 5 + 2 = 7 was appropriate, while Water completed the cycle in Winter with 1 and 5 + 1 = 6, perhaps because that was when the fields were flooded and it was the time for rain and snow.

7
2
5
8 3 5 4 9
5
1
6

The final form of the He Tu

However, the Japanese version of the Five Phases that Shirakawa uses on pages 30 and 144 is a different system which used the final and not the original form of the *He Tu* that is traditionally used in China. Cammann says that the clumsy explanations for the final system indicate that it was a more recent construction by a group trying to imitate their rivals, who used the *Luo Shu* to sequence the Phases.

Also, Shen Gua, the Song practitioner that Shirakawa refers to, seems to have changed the number correlations that Cammann's first

century AD Chinese source used in the final form of the cross with its clumsy explanations. Shen Gua says that Wood, (2 and 5 + 2 = 7 in the Chinese source, but 3 and 8 in his version), gives birth to Fire (4 and 9 and 2 and 7 respectively), such as in a fire-starting drill. Fire gives birth to Earth, (5 + the mystical 10 in the center in both versions), by creating ashes. Earth gives birth to Metal, (4 and 9 in the Shen Gua version), when ore is melted. Metal gives birth to Water, (1 and 6), when it becomes liquid; and Water gives birth to Wood by nourishing it.

As might be guessed, there were a myriad of other bewildering systems for representing and manipulating the numbers and matching phases of the final forms of the Maps that developed since the Han period. As mentioned, at least until the Song dynasty, many were closely guarded secrets for esoteric and/or commercial reasons. In any case, the general idea is that everything in the universe has the quality of one or more of the Phases, and is produced, or can be replaced by another.

Incidentally, however different the Five Phase sequences were, when applied to Nine Star Divination, they all have one interesting thing in common: at the end of the calculations 'evil' stars (such as the 'Ravenous Wolf') can become good for one's fortune. Field explains:

Obviously these questions [about how baleful stars can bring good luck and vice-versa] have been asked before, because of the popular texts that discuss the bazhai *methodology, most rely on* wuxing *'five phase' correlations to explain the derivation of auspice. The five phase and eight trigram cosmological systems were also correlated early on, even though five- and eight-term series are not easily overlaid. Figure 4 gives the* houtian *sequence of trigrams, the orthodox translation of trigram names, their directions, and their five phase correlations.*

Figure 4. Five Phase Values of *Houtian* Trigram

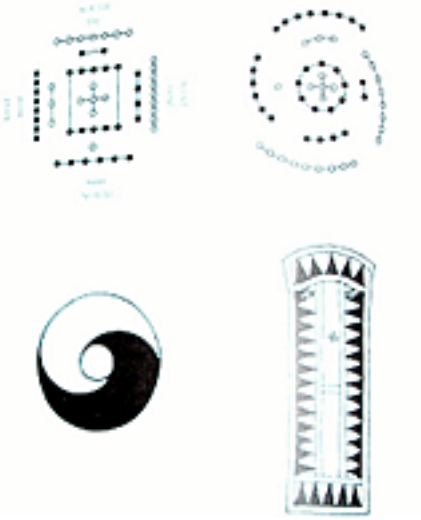
The supposition of orthodox fengshui *is that when the five phase value of the natal trigram is matched with the five phase value of the directional trigram, good fortune is indicated when the two exhibit a relationship of* xiangsheng*, or 'mutual production,' while bad fortune is indicated when the two exhibit a relationship of* xiangke*, or 'mutual conquest.'*

For example, let us imagine that a person with the natal trigram xun *wanted to build a house facing the direction north. From fig. 4 we see that* xun *has the phase 'wood,' whereas the direction north is occupied by the trigram* kan*, which has the phase 'water.' In the mutual production order of the five phases, water nourishes wood, so this conjunction of* xun *and* kan *would indicate good fortune.*

By page 81, Shirakawa, if not the reader, is ready to apply Nine Star Divination to the go board.

Part VI

Diagram of the ‘Blessings of Heaven on Earth’



On page 84, after a meandering discussion of the importance of the center point being the Supreme Center and the source of life, Shirakawa finds a relationship between several entities. On the upper-left is the square Yellow River Map. In the upper-right is a circular Yellow River Map that he says ‘symbolizes the vortexes of the river and its energy, which produces new life.’ Although he doesn’t mention it, this somewhat resembles the double-comma-shaped, *yin-yang* ‘Diagram of the Supreme Pole. Last, there is an old Japanese war shield with which he strangely tries to establish a connection with the Chinese *yin-yang* sign. However the small commas inside the outside decoration (which are hard to see here) are separated and face outward instead of inward, as they do in China.

He then quotes from Wilhelm’s translation of *The Great Commentary* of *Book of Changes* (which was erroneously but convincingly said to be written by Confucius).

Therefore, there is in the Changes the Great Primal Beginning. This generates the two primary forces. The two primary forces generate the four images. The four images generate the eight

trigrams. The eight trigrams determine good fortune and misfortune. Good fortune and misfortune create the great field of action.

The problem for this proposal is that if go originated in divination practices of the Shang, the *Book of Changes* didn't appear until the 9th century BC at the earliest (according to one account and much, much later according to others), after the Zhou had conquered the Shang, and it was preceded by a book called the *Zhou Yi.*

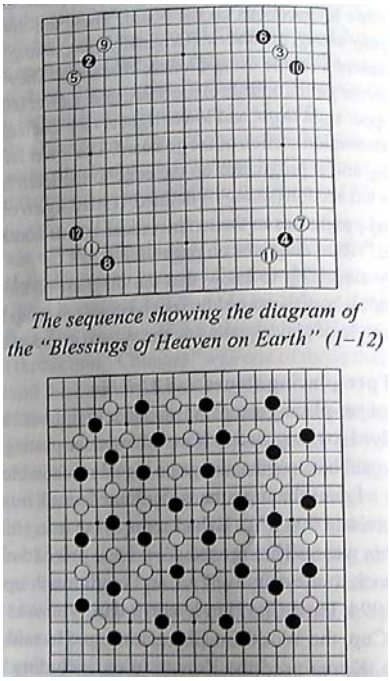
Next, Shirakawa claims that the Supreme Pole diagram 'will appear to go fans to be black and white stones.' What he is probably referring to are the little opposite-colored dots inside the two commas of the *yin-yang* sign on the cover of his book, (but not in the one on page 84 above). The reason for their appearance is that the only pure *yang* in the traditional Chinese universe is the sun and the only pure *yin* is the moon—everything else is a mixture. (Incidentally, the small dots in the center of the commas do not seem to have appeared until after the sign was developed in the 11th century AD).

Next, Shirakawa goes back to the subject of the Yellow River Map, falsely declaring that, 'Actually, it was the source of black and white stones.' (Then comes his example of the Chinese player who 'liked to play his first move on the center point').

This is followed on page 87 by another recasting of the knot theory, followed by the hypothesis of an unnamed person from *The Soul of Black and White*, who said that the Yellow River Map 'was a meteorological map' because it has the four directions and even and odd numbers . . . which are generally thought to represent the temperature range . . . ' However, as has been indicated, the Maps were thought to represent *everything* in the universe, including the past, present and future, not just the temperature or the directions.

Next comes a conclusion by Go Seigen about how harmony in go results from the balance of *yin* and *yang*, which no one would suggest is not true, but that doesn't do much to connect Five Phase Theory in any meaningful way with go.

Then he names the *Commentary on Shi Qing Lu* as the source of a mysterious diagram he found in Go Seigen's *Commentary on the Mysterious and Profound Go Sutra*. He says that, 'this is a method of pre-placing stones in ancient times,' that, as far as I know, was only known to the writers and readers of *Shi Qing Lu.*



The sequence showing the diagram of the "Blessings of Heaven on Earth" (1–12)

It employs a 19x19 board in a strange sequence described as ‘The Diagram of the Blessings of Heaven on Earth,’ which, he says, ‘replaced the earlier ‘Heaven covers everything and Earth puts everything on it.’’

Without explaining anything more, Shirakawa writes that Go Seigen said this ‘handicap’ method was used at least until the 1920s as ‘a way of preventing imitation go,’ although why this is so is also not explained and hard to understand. Perhaps the translation is at fault, because this is obviously not a handicap setup, but rather an esoteric diagram showing how 64 stones can be laid out on a 19x19 board. However, they are not even laid out symmetrically—compare the top of the lower diagram with the bottom.

He says that the modern board has 19x19 lines, but that the ‘second’ *Commentary on Shi Qing Lu* comments:

Here I show the completed diagram with the 64 stones. This diagram corresponds to the way go was played. Shen Zaizhong said, ‘The ancient go board had 17 horizontal and 17 vertical lines with 289 intersections. There were 64 intersections of the edges, that is Fu Xi’s square [hexagram arrangement] and circular [trigram arrangement], namely, the so-called Earlier Heaven Sequence.’

It is true that 4 x 17 (minus the 4 corner intersections that are used twice) does equal 64 and there are 64 hexagrams, however, it is hard to see anything but an accidental relationship between that and go—unless it is that the go board is square and the Fu Xi set with the black and white dots is also square.

In any case, this is about the only feature of the 17x17 go board that could be even remotely equated with mystical properties—there are no 17x17 magic squares in Chinese history, for example. Because they were so in awe of the magic properties of their 3x3 version (which they were the only ancient people to develop), they did not do the necessary math and only constructed a few other magic squares. 289 (17x17) held no significance for the Chinese, and what the 17x17 board had to do with 'Fu Xi's square and circular arrangement' is not stated by Shirakawa. So it requires quite a stretch of the imagination to accept his word that, '64 is the key that links go and ancient Chinese culture—divination and astronomy.'

The Early Heaven Sequence and the Fu Xi Trigrams

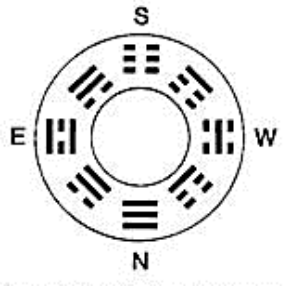
Next, he turns to the Earlier Heaven Sequence, but unfortunately he does not give much background, so some must be provided. As mentioned, it was said to have been invented by Shao Yong during the Song period and supposedly was based on the *He Tu* Yellow River Map. This was opposed to the above-mentioned Hou Tian Post or Later Heaven Sequence, which was allegedly designed by King Wen c. 1000 BC, along with a set of hexagrams that allow a direct reading from the *Book of Changes*.

However, Cammann shows that recent research, (mostly his), has rendered obsolete many of the accepted theories of the origins and development of the Eight Trigrams. He discusses in some detail what he has reconstructed of the history of these two systems.

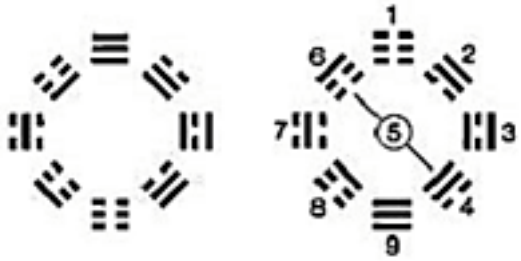
As mentioned, with social changes and the appearance of new ways of thinking in the course of Chinese history, there were inversions, eversions and reversals of the circular patterns of the Eight Trigrams, and this allowed him to postulate changes in the *Luo Shu* magic square, and the numerical arrangements of the cross-like *He Tu*, that they were associated with.

Like the discussion of the Maps, the following survey may seem overly technical, but I feel it should be presented in some detail in order to make sense of what is in Go Seigen and Shirakawa's arguments—and what is missing. On the other hand, readers who want to know more about these matters are urged to examine Cammann's four articles because his revolutionary findings are even more complex and contrast even more with the views of Shirakawa and others that have appeared in academic and non-academic literature, and on the Internet.

First, Cammann argues that from a long tradition of changes preceding the Song Period, Shao Yong must have inherited rather than invented the Earlier Heaven Sequence. He says that first, when the Zhou conquered the Shang, they rotated the circle.



The possible initial Shang ordering of the Eight Trigrams (the original Fu Xi circle) with the Mother on top and the Father on the bottom and the Second Daughter in the East because the Mother and Daughter were associated with the South, East and warmth, while the Father and Second Son were associated with the North, West and cold.



The second, rotated trigram circle and the third change, inverted and numbered to complement the early Luo Shu, before the

exchange of the 2 and the 8*. Note how the female numbers become male and vice-versa, how their ages were reversed, and how the gender signifiers are one line, not two.*

The *Luo Shu* is square and represents the *yin* earth, while the trigrams were arranged in a circle, representing the *yang* heavens. In the original of what became the Fu Xi circle, the gender would have been determined by the preponderance of either male or female bars—the second family system (see below for more explanation). This, Cammann says, is the only way to explain later changes.

Since the circle was round and *yang*, it 'hovered' (the word is mine) over the *Luo Shu* (and not the *He Tu* as Shirakawa and traditional Sinology has suggested—again, see below). Thus, it had to be flipped over and reversed so that the opposing *yin* and *yang* numbers of the *Luo Shu* and the trigrams complemented each other and added up to 10. North was put on top and South on the bottom.

As for the center, the old Chinese character for 5—two inverted triangles that later evolved into an **X**—were a perfect symbol of the meeting of the two cosmic forces. Additionally, 5, as mentioned, also contained the *yang* of 3 and the *yin* of 2.

To make things even more complicated, as discussed earlier, the Chinese believed that 10 was the 'completed number' of the previous nine, so that, even if the Celestial Plan was not taken into account, an even *yin* number's complement was *yang*, though it, too, was even. This process also held for the *yang* odd numbers.

Thus, Cammann writes,

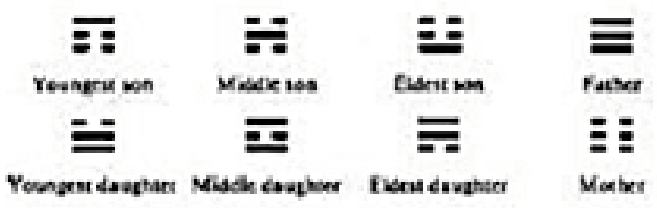
. . . the 9 at top (or South side) of the Luo Shu [earth square] was full yang, but it had as its compliment the 1 of yin, while the 1 the bottom (or North side) of the diagram was also yang, but it was overshadowed by its (invisible) compliment of full yin. It was most appropriate of the Chinese thinking that the secretive and recessive principle in nature, the yin, should keep its fullest powers hidden.

Thus, the *Luo Shu* could show a complicated progression through the year: as winter waned, *yang* numbers were withdrawn from the heavenly trigrams to replace *yin* numbers on the *Luo Shu* until all were *yin*, then the reverse began at the height of summer. There are also eight ways of making a magic 3x3 square and the other ways were sometimes employed for symbolic purposes.

4 9 2	**4 1 2**	**6 9 8**	**6 9 8**
3 5 7	**7 5 3**	**3 5 7**	**7 5 7**
8 1 6	**8 9 6**	**2 1 4**	**8 9 6**

This cycle begins at equilibrium on the left (the Luo Shu *arrangement). Next is a* yin *cycle since the* yang *numbers are 'attracted' or 'move' toward what has become their* yin *compliment and become yin. Then there is a* yang *cycle, which becomes a* yang *cycle at full energy (that is beginning to decline).*

Also, following the reversal of the 2 and 8 to make the *Luo Shu* a magic square, the arrangements of the trigrams followed. But this necessitated a new rational for the genders, since it was unthinkable for a female to reside with the males and vice-versa. Thus, broken bars were no longer treated as a unit and each one was counted. This is the second family system. Even quantities of full or half-lines (four or six) constituted femaleness and uneven quantities (three or five) meant maleness.

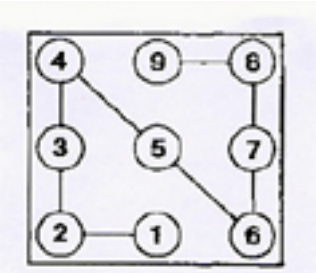


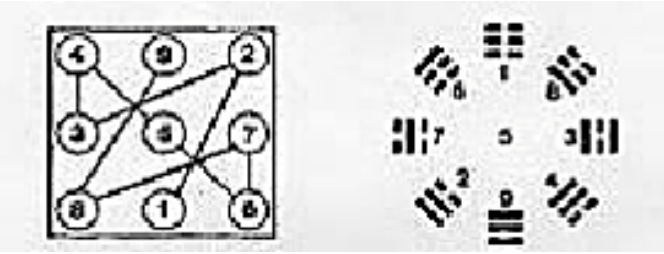
The Second Family System: Note how single yin *and* yang *lines move through it.*

After offering proof of these alterations from passages in the *Book of Changes*, Cammann suggests that the result provides the key for the interpretation of a number of mysterious Han statements, such as, 'The *yang* in operation advances, the *yin* in operation withdraws.' This can be understood because the numbers of the trigrams now gained in value as seniority of the males increased, and decreased as the seniority of the females increased.

He also suggests that this may have been the origin of the idea for having the small dots of opposing color in the *yin-yang* sign of the Song dynasty.

Another result of the exchange of 2 with 8 was that instead of a graceful S that formerly would have been taken by the sky god Tai Yi in the halls of his heavenly palace around the pole star, it became a zigzag pattern and the source of an impressive Taoist ritual dance. It is also the source of Daoist charms.

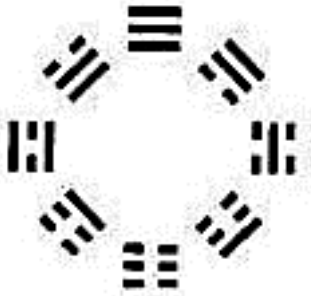




Tai Yi's original tour of the Luo Shu Heavenly Palace and the one that resulted after the reversal of the 8 and 2. On the right is the resulting form of the Fu Xi trigram set.

A Daoist charm based on the final form of the 'Dance of Tai Yi.'

Still another result was that again a male was now in the female side of the family and a male in the female, but this problem was solved by defining the gender as that of the bottom line rather than by counting the number of *yin* or *yang* lines.



The Final Fu Xi Trigram Circle

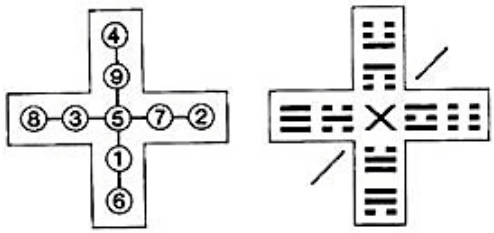
Next, the circle was rotated so that North was at the top, probably because of the introduction of the geomancy compass in the Han period and this is the one that is ascribed to Fu Xi by Shao Yong in the Song as the Earlier Heaven Sequence. Note that the directions returned to their former 'selves'—South and West were now 'properly' *yang*, and North and East were 'properly' *yin*.

At some point, as Cammann demonstrates, these trigrams were doubled in a simple operation to become the 'Fu Xi Hexagrams,' in which well-ordered female hexagrams face male ones across the circle. And this, in turn, became the so-called 'ancient Chinese binary system' which academics, Shirakawa and many others have misinterpreted as a Chinese correlation to Liebniz's 18th century

discovery. That discussion will only add to the distance that Shirakawa's explanations are separated from what is known of the actual history of divination and go.

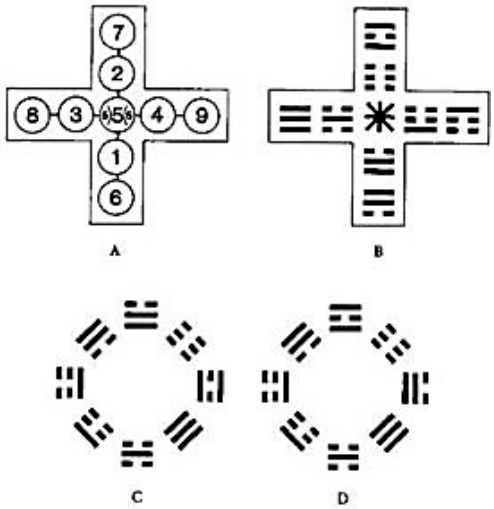
Part VII

The Later Heaven Sequence and the King Wen Trigrams



As for the group using the *He Tu* trigrams, after its numerical model separated from the diamond pattern and the *Luo Shu*, and after the 8 and 2 had been transposed, the major trigrams were opposed across the arms of the cross—which, by now, represented the four directions of the earth.

Using the second system of family relationships that counted each part of the trigrams to determine gender, a line divided the males from the females. The **X** in the center was the Chinese character for the number 5 with all its symbolic values.



A. Final form of the He Tu. *B. The trigrams arranged to correspond. C. The preliminary Celestial Plan. D. The final King Wen circle.*

Following the changes of the number patterns discussed earlier, though not directly associated with them, the trigrams also were shuffled. The star in the center resulted from the character for 10 (**+**) being imposed on the character for 5 (**X**), giving three 5s, two of which were mystical. Now all the males were on the side arms and the females in the upright area.

The next step was the creation of a Celestial Plan trigram circle to go with the cross. After having been given the King Wen story of its creation, and following the order in which Chinese work—from top to bottom and from right to left, perhaps the females were first taken and arranged on the right-Western side, and males put on the left-Eastern side of the circle.

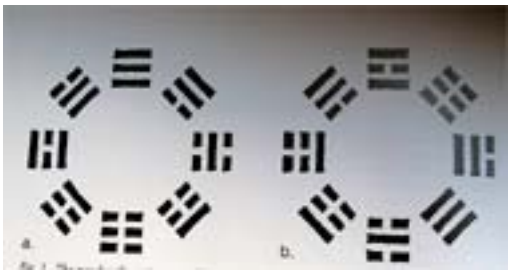
Then, to maintain the sun-moon *yin-yang* opposition, the *Li* diagram (the Sun) was put on top by exchanging it with *Dui*, the Lake trigram. This became known as the Later Heaven Sequence and was paired and/or contrasted with the Fu Xi circle since the Song period. Cammann suggests its confusing pattern may have been purposively made to help keep its contents secret, and its different order from the Fu Xi circle indicates its independent development.

Thus, the two circles evolved quite differently. The Fu Xi system used a pre-existing circle and applied numbers to it. The King Wen version—which was composed after the Fu Xi circle had come to completion, probably in the late Warring States period—was derived from the altered numbers on the *He Tu.*

Actually, there were two King Wen versions—the second was well known in the Han and used for ornamental and practical purposes. However, no one seemed to realize this was an everted, inside-out version of the early *yin* form of the King Wen, and it probably lost its taboo quality when the *yang* form evolved later.

There were never any numbers applied to the King Wen Circle since it would have meant having a female on the male side and vice-versa (meaning that *Li*, the sun, was represented by the second daughter and *Dui*, the Lake, by the second son—which is another indication that there must have been an earlier system based on two line gender identification, not one line which the Fu Xi, but not the later King Wen set used).

Another feature that is different is that the youngest siblings instead of the oldest are next to the parents—a *yin*-like, protective feature, but also one that led to the development of a respect-for-elders, male-oriented, third family hexagram set which, as Cammann shows, was used in the early Han.



The Final Fu Xi and King Wen trigram circles.

To sum up and review these complicated matters, Cammann wrote in his Dualism article:

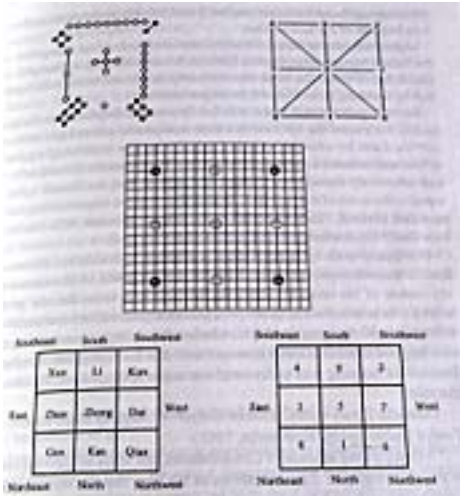
We have seen that the Fu Hsi circle of trigrams must have reached its present state because a group of ancient Chinese scholars applied to its third primitive form the numbering of their early Lo Shu square and then later modified this to conform to the adjusted numbering on the fully developed Lo Shu; while the circle ascribed to King Wen must have attained its present appearance after a second group had previously deployed it on the cross-shaped frames of two successive forms of the Ho T'u. This completely reverses the usual statements made by historians of China's culture—whether Chinese or Western—who have maintained that the trigrams ascribed to Fu Hsi traditionally belonged with the Ho T'u, while those attributed to King Wen belonged with the Lo Shu.

He says that the reason for this mistake probably comes from a Han scholar's misinterpretation of a perhaps pre-Han phrase, 'Tai Yi gathers the numbers (for divination) by traveling the Nine Halls.' To describe Tai Yi's journey, the scholar superimposed the final King Wen trigram circle onto the Nine Halls, whose numbers were the *Luo Shu* magic square. This shows that by the Han period, there were two Celestial Plans, the Fu Xi and the King Wen, but that the relationship

of the Fu Xi set of trigrams with the *Luo Shu* had been forgotten, so the King Wen set was used.

However, at the time of the quotation, Tai Yi would have probably been following the **S** form of the earlier *Luo Shu*, before the transposition of the 2 and 8 made the trip into a zigzag. At the time, this scholar also probably did not know that the King Wen version was never associated with numbers. In fact, if the King Wen trigrams were given the *He Tu* numbers, it would have meant, as mentioned, that a female would be in the male group and vice-versa, which was unthinkable. So all this led the scholars who followed him to associate the King Wen trigrams with the *Luo Shu* magic square and left the Fu Xi set assigned to the *He Tu*.

Nevertheless, on pages 97-99 Shirakawa continues to build on the mystical theories of the above-mentioned Lu Xiangshan, the 12th century mystical philosopher, concluding again that the origins of go are linked to the 'magic square' of the Luo River Map, the Eight Trigrams, and the Nine Star Chart of Divination. Without explaining, he then mysteriously adds a comment from the *Shi Qing Lu* that the nine star points on go boards, 'may be the deification of the Magic Square, which is shown in the Second Root diagram (*fanshu*) of the Luo River Markings.' Perhaps this oblique reference to 16th century *Book of Changes* esoterica is why he wants to call the illogical first nine moves on the star points of an imaginary game a 'magic square,' which he illustrates on page 101:



Shi Boards *Redux*

Next, he returns to the subject of *shi* boards, and on page 104, as mentioned earlier, he mistranslates *xuan shi zheng qi*, saying, 'They spin the diviner's board and analyze the stones on the board.'

However, a page later, he mysteriously says, 'Yang Xiaoguo [of the Shanxi Province Academy of Social Sciences] correctly interprets *xuan shi zheng qi* to mean: 'Spin *shi* (a tool for divination) and clarify *qi* (divining blocks).'' These are the black and white blocks of wood, half-rounded on one side and flat on the other, that Daoists cast down on the ground for divination. They determine the balance of *yin* and *yang* in the matter being questioned, but they were not used in *shi* board divination and had nothing to do with *qi*. (See Appendix I for further comments).

In the first article on his Internet site, Dr. Field discusses 'spinning' on the *shi* board and it can be seen that the operation had nothing to do with go. Noting the common Han expression, 'On the *kanyu* the male is slowly moved to know the female,' Field writes:

By means of the cosmograph the configuration of the heavens could be determined at any time of day or night for any month during the year. First, the cosmographer would orient the earth board to the cardinal directions, represented by the four sides of the board. Then he would align the number of the month on the heaven disc with the double-hour of the day or night from the earth plate. Finally he would note the constellations on the portion of the disc that fronted the southern edge of the board. These are the asterisms that would appear in the sky in the month and hour of the query. . .

Readers may wonder what part the ancient cosmograph played in the location of auspicious sites. Each of the 28 constellations of the zodiac corresponded to a particular earthly region, as did each of the Earthly Branches and, later in the tradition, the eight trigrams of the Yijing, the five elements or phases, etc. Time and space were thus joined in a prognosticatory system that enabled one to choose a fortunate location for a particular time or a fortunate time for a particular location. The cosmograph is more astrological than geophysical, perhaps, but later accretions would slowly transform it into the familiar luopan*, or qimantic compass, of which it is the obvious precursor. . .*

Next, Shirakawa, apparently following Yang, continues to misinterpret the phrase and the use and history of *shi* boards:

Here "Clarify qi*" is important because this interpretation indicates that qi, which corresponds to the original model for the go board of today, used to be a tool for divination. . . .*

The Index of Historical Records explains the Xuan shi zhen qi *as follows: '*Shi *is* shi*,* Xuan *means spinning. The upper part of* shi *is circular like the sky, while the lower part is square corresponding to the earth.* Shi *was used by spinning and combining the net of heaven with the stars of earth (The 'stars' represent the go board). Therefore, it is called* Xuan shi*.* Q*i is the shape of yarrow stalks.* Zheng qi *probably means divination with the Eight Trigrams. . . .*

Combining the net of heaven with the stars of earth' means superimposing the Supreme Pole surrounded by the four trigrams on qi*. The circular one represents the upper side, heaven, while the square one represents the lower side, earth. To put it simply, ancient people divined by spinning what was the prototype of the go board . . . The method of* Xuan shi zhen qi *reflects the philosophy of the people in the Shang and Zhou periods.*

To support the distortions in these statements, several quotations are given, but the only relevant one is, 'The circularity of heaven is like a dome. The squareness of earth is like a go board . . . ' This is from *Zhou Bi Suan Jing*, but he doesn't mention that it was written in the first century AD, more than a thousand years after the fall of the Shang.

Finally, page 135 ends with one of Shirakawa's several specious attempts to unite the idea of energy *qi* of *yin-yang* theory with the very different *qi* of *wei qi*, and a summary of Yang's rather strange and unsubstantiated view of history:

The basic use of 'Spin shi *and clarify* qi*' just lies in moving the dome of heaven to quiet the earth board. When the heavens move, the wind rises, that is, the wind causes the changes of* qi*. Go is akin to nature. . . .*

With regard to the origins of go, the birth of 'Spin shi *and clarify* qi*' was of great significance, and it was connected with the subsequent birth of the go board. We have to consider it a great thing*

that it brought about not only the birth of the go board but also the important idea of qi *to go and the diagram of the Supreme Pole surrounded by the eight trigrams.*

Before this, however, on page 106, Shirakawa quoted Yang: 'The lower part of *shi* is *qi ping*, an ancient tool for divination. It is the original model of the go board.' Yang might be trying to say that the predecessors of the bottom of the *shi* boards are square and were once used for divination, but, as far as the archeological record is concerned, that is where the resemblance ends—as mentioned earlier, they did not have grids, and they date only from the 4th century BC, at least six hundred years after the fall of the Shang. And they did not, to my knowledge, have the trigrams or hexagrams on them, although sometimes, the Han *shi* boards did. Yet, Yang says, ' . . . when the methods of "spin *shi* and clarify *qi*" . . . appeared, the concept of the four seasons existed among the people, but the eight trigrams had not yet attained full growth.'

Yang continues by saying that when the Supreme Pole and the four trigrams, 'which later evolved into the eight trigrams' are combined into one, it becomes the first tool for "spin *shi* and clarify qi in the Shang period"'—which is utter nonsense. He adds, ' . . . another name for the grid of the go board *gua* is based on this.' It is true that the characters are similar, but the resemblance certainly did not originate in the Shang.

To further illustrate his thesis, or rather the watering down of it, Yang cites the *zhan pan* (sometimes called *zhan fang*) as a precursor for the go board. He says it had 'a center point, four seasons and nine star points—directions used for the most fundamental opening which go players in later years used.' (page 108)

But here is what Stephen Field has to say about zhan pan:

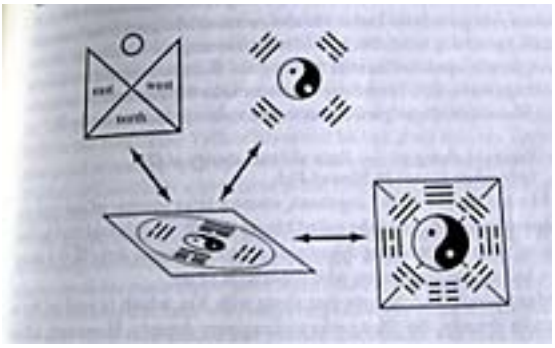
On various divination boards buried in Han era tombs the numbers and the trigrams can be indirectly related. As for the numbers, in an early Han dynasty tomb in Anhui province a zhanpan *divination board (dated to 173 BCE) was discovered on the face of which were inscribed nine numbers in the* luoshu *[magic square] configuration. The disc of the* zhanpan *was divided into eight equal segments by four intersecting diameters, the endpoints of which were numbered in the order 4, 9, 2, 7, 6, 1, 8, 3, reading clockwise.*

In other words, it seems that *zhan pan* were round and looked like the spokes of a bicycle wheel, with eight numbers on the rim, and did not resemble a go board in any way.

Even if Yang were correct in his description of nine go-like ‘star points’ on the *shi* and zhan boards, this would of course obviate Shirakawa’s earlier assertion that there were only five star points ‘in ancient games.’ Also, if they were played on first, as in the ‘magic square’ diagram above, it might make one wonder about the mental capacities of early go players.

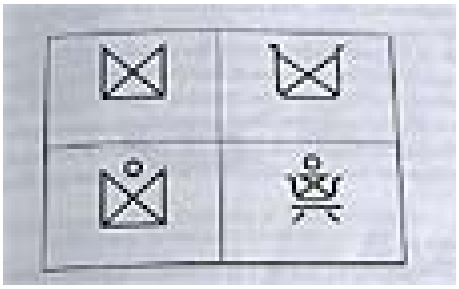
And, again, it should be mentioned that the ‘Stars’ of the divination diagrams were not the star points that we go players are accustomed to because seven were Big Dipper stars and two were ‘hidden.’ Because they were good or evil, they were the end point of the calculations—not the beginning spots on divination boards, whose compartments were called by such names as the Eight Halls of the Palace, with the empty center being the courtyard. Even if the first boards were 9x9, as will be discussed shortly, the operations carried out were entirely different than go-playing.

On the next page are Yang and Shirakawa’s illustrations and explanations of their theories.



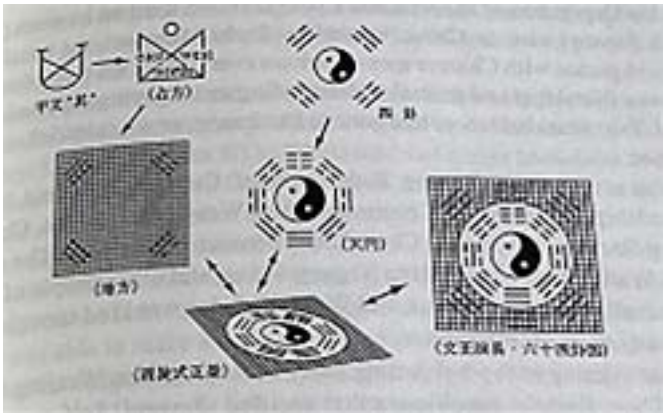
Page 107

Upper left: Zhanpan *with clockwise ‘West, North, East.’ Upper right: the four trigrams. Lower left: Xuan shi in the Shang period. Lower right: Fu Xi’s Eight Trigrams.*



Page 111

Left side: The design of ancient zhanfang *and* qiping*. Top left: Ancient* zhanpan *in the shape of* □ *. Right side: The oracle bone inscription and bronze inscription in the Shang and Zhou period. Top right: The oracle bone inscription* □*. Bottom right: The bronze inscription* □



Page 113

Left: The oracle bone inscription qi >zhanfang>difang*. Right: The Four Trigrams>tianyuan. Bottom:* Xuan shi zheng qi *in the Zhou period <>the 64 Hexagrams, which was the variant of divination used by King Wen.*

Throughout this confusing section, Shirakawa and Yang also pursue some curious etymological arguments that deal not only with the beginning of go, but the creation of the Fu Xi Eight Trigrams. To sum them up, it is true, as Yang and Shirakawa state, that the *qi* character in *wei qi* had its beginnings in an oracle bone character for a square winnowing basket (*bo ji*), which had a grid-like sieve pattern. However, according to experts on literary go history, nothing else is

known about the development that resulted in the first character used for go in the Confucian literature of the Warring States period. *(See Appendix V). It is important to note that this was *yi*—not the *qi* of *wei qi*, which did not appear until the Han. *Yi* is two hands in front of a board, *qi* shows a legged board, with radicals for stone or wood to probably show the material.

Nevertheless, Yang and Shirakawa would like to give a divinatory meaning to the oracle bone character for *qi* by making it into a verb (*qi yu* 'It rains.'), despite the fact that the character did not appear until the Han. They then relate this to the blocks of Han Daoist divination, the *qi* of *wei qi* and the *qi* of *yin-yang* (which was mentioned before), and take this spurious association back to the Shang, citing a false history of the Han and late Warring States *zhan pan*, *qi ping*, *di fang* and *gua* divining boards. And, their portrayal of the trigrams on go boards in the illustrations is purely imaginative, as is their argument that, after the Four Trigrams developed into the Eight Trigrams:

Heaven and earth were combined to xuan shi zheng *qi in the Zhou period or* Xuan shi *of King Wen. As a result of further evolution, the Changes of the Zhou and the 64 hexagrams appeared.*

But ironically, although in a different way than perhaps they intended, they can truthfully conclude that:

The question is now resolved as to why the diagram [of the 'Blessings of Heaven on Earth'] has come down in The Mysterious and Profound Go Sutra.

Part VIII

Mt. Qizi and Board Sizes *Redux*

Next in the book, Shirakawa begins discussing the old legends of Mt. Qizi and Jizi (or Qizi as his name is sometimes spelled in Pinyin), an aristocrat of the late Shang period, who may have led an immigration into Korea. He mentions that natural black and yellow go stones have been found by archeologists, (which were the colors described by Ban Gu in the Han period). He had already used Yang Xiaoguo's fabrication on page 71: ' . . . sages of those days [meaning the Shang] acquired through *qibu* (divining fortune or misfortune of the year through the result of a go game),' and that Jizi 'was also good at *qibu.*'

As discussed in the text of my *Origins* article and in Appendix I, the possible sources of this kind of fiction are two early uses of the word *qi*. In one, it referred to a divinatory game that was played by casting long sticks that was certainly not go or chess.

Another possible source is that Yang, like Joseph Needham, the great Sinologist, misinterpreted a 4th century BC funeral rite poem in which the juxtaposed words *xiang qi* appear. This is the common word for chess and Needham conjectured (against the advice of his Chinese co-writer Lien-sheng Yang) that it meant that a hypothesized, divinatory, mystical chess game with magnetic pieces was being played. Because there was little information available when Needham wrote, he could hypothesize that this chess game preceded go, which he thought was no older than the middle Han period. He had no evidence for the magnetic chess game's existence, nor has any been found.

Although there have been arguments, most scholars agree that the reference is to a list of objects to be buried with the corpse—that the two words refer to *liu bo* ivory dice pieces that have nothing to do with divinatory game-playing. (See the main *Origins* text for more details).

In any case, although there could be a mistake in the translation, it is evident from Shirakawa's Yang that the stones the archeologists found were Han period stones, and not as old as the

Shang, since he says they show us the shape of go stones as they were ‘2,000 years ago.’

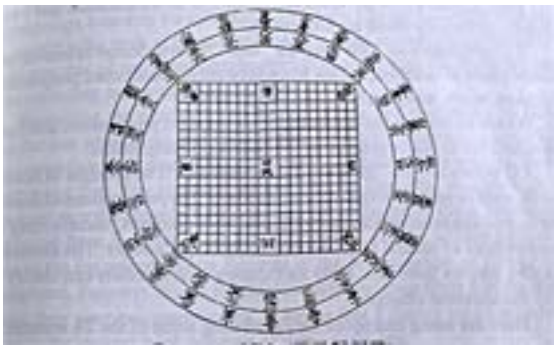
After further pursuing these kinds of theories up to page 112, Shirakawa segues into some anecdotal incidents before beginning an investigation into the history of the size of the board. On pages 128-130, he examines Dr. Ogawa Tamaki’s theories that the original go boards were 9x9 with 64 squares, which were later joined by their edges to make 17x17 boards. This is a reasonable argument.

However, he says Dr. Ogawa, ‘based neither on literature nor archeological evidence,’ then theorized that these ‘derived from the Eight Trigrams for divination.’ Ogawa opined that they were like the same-sized 8x8 squared chess boards in India, which, he says, were originally played on by four people. This is an old, and largely discredited theory, but was popular in Ogawa’s time in the 1930s, so he could theorize that when chess came to Japan, it was played on 9x9 squares between two people because ‘four generals’ were left over from the original.

Shirakawa then gives some misinformation about the oldest go boards, and writes nothing about the nature of some of them that were stone that was mentioned briefly before. They were buried in tombs and not meant to be played on by living persons. Perhaps because they were made by craftsmen who didn’t play, as in many of the old Japanese wood block prints, these boards had no set number of lines—one was 21x21, others were smaller than 19x19. Or, perhaps, as is the case in Tibet, often little attention was paid to the board size. These early boards and stones are discussed in the text of my *Origins* article and in my Internet article on Tibetan go. It should also be pointed out that the earliest board is now one that was scratched out on a roofing tile (with, incidentally, a star point) and left in the tomb of Han Jing Di (r. 157-141 BC). There is a photograph of it in the October 2001 *National Geographic Magazine*.

Part VIX

San Yuan Qi Li Ju: Applying Nine Star Divination to the Go Board



San Yuan Qi Li Ju

Heaven, earth and man form the Three Powers. The numbers of the 24 seasons and the nine directions are given in their forward and backward progressions. Winter Solstice is the beginning of the forward progression, and Summer Solstice is the beginning of the backward progression.

From A Commentary on 'Shi Qing Lu'

On page 137, this diagram of a go board surrounded by a cycle of the 24 seasons initiates a long section that is bound to puzzle many Western readers, but which, by now, hopefully, is more understandable because of its precedents in the Shang turtle design, and the arrangements and contrasts between the shapes of magic squares and their accompanying trigram circles.

Shirakawa writes:

This picture shows us what the go board was obviously used for in ancient China. . . . When I saw the diagram, San yuan qi li ju*, which was featured in the design on the box containing the books [of the* Shi Qing Lu *in Go Seigen's house], I firmly believed the go board had been used as a calendar in ancient times.*

. . . Because . . . the nine star points symbolize the stars, we intuitively know that go has some relationship to astronomy.

However, there are no star points on the *San Yuan Qi Li Ju* board, though they appear on the go board 'calendar' on page 123.

I can only give an approximation of what Shirakawa writes in the rest of this section:

First, he relates how this diagram and *Shi Qing Lu* demonstrate the relation between the go board and the Three Powers. The Three Powers are:

1. The 24 seasons which correspond to the 'axis of heaven' [around which the seasons spin].

2. The forward and backward procession of numbers which correspond to the 'axis of man' [perhaps meaning the forward march of Yin in the first half of the year and in the lives of humans, which then begin to decline into extreme Yin, winter and death].

3. The nine directions which are the 'axis of earth.'

He then writes that,

A Commentary on Shi Qing Lu *says: 'Every change of heaven and earth exists in numbers, which have a forward and backward progression. Heaven, earth and man have this progression.'*

This may relate to the progression of the *Luo Shu* magic square *yin-yang* numbers through the year that was mentioned before, except that he seems to be applying these changes to the nine directions indicated on the go board above and various resulting positions.

In any case, he is beginning an analysis of the 19x19 go board in terms of Nine Star Divination, so that all things can be seen on it. This might be 'true,' however, this section has nothing to do with early go.

He comments, ' . . . the forward progression of the nine numbers from left to right sometimes progress backward,' and, 'They are derived from their position and are based on the *Luo* River Map and are called *yong jiu* in *Book of Changes*.'

However, he says, 'It is unknown how the ancient Chinese used these numbers to make calculations.' But then he quotes Lin Yonglin, the author of *Shi Qing Lu* on page 139:

'Some people say that Yao invented go and his son Dan Zhu was good at it.' Looking over the records, however, they are all based on the evidence of a quotation from Records of the Investigation of Things*, written by Zhang Hua in the Jin period. When Records of the Investigation of Things was completed, Emperor Wu of Jin [236-290 AD] deleted some writings from that book because they were too complicated. It seems that a theory on go is incomplete in the current book because of these deletions.*

*The problem with Shirakawa's statement that ' . . . they are all based on the evidence of a quotation from Records of the Investigation of Things . . . ' is that the first mention of Yao, Dan Zhu and go appeared in written form in the *Shi Ben*, a lost book of the Warring States period, with no mention of its source. This story surfaced in Han dynasty and later commentaries, such as Zhang Hua's, and was recorded by Du Yu in his *Tong Dian*, around the 8th century AD. Whatever theories Zhang Hua wrote are apparently his own and only date from after the Han period. Nevertheless, Shirakawa forges ahead:

. . . The changes of heaven, earth and the seasons exist in . . . numbers. The progressions of heaven, earth and the seasons can be calculated with numbers, namely they are the numbers of natural phenomenon in Book of Changes. The essence of go also derives from this. Only calculation with numbers can clarify the way the universe changes.

He then gives a demonstration for calculating them by various formulas. For example, the names and numbers of some of the seasons are:

Solstice	*1 7 4*
Slight Cold	*2 8 5*
Great Cold	*3 9 6*
Beginning of Spring	*8 5 2*
Rain Water	*9 6 3*
Waking of Insects	*1 7 4*

But he adds, ‘The explanation of the difficult numbers is so troublesome that I will briefly write only about the key points.’

Using the idea of 72 weeks of the Chinese calendar being represented on the edges of the go board (because on the 19x19 board, as in the case of the hexagrams, the corners are used twice so that 18x4 = 72), Shirakawa says that the year divides into four seasons which divide into 12 months, which divide into 24 seasons, which divide into 72 weeks.

‘Every change is seen through *yin*, *yang*, Five Elements, Ten Celestial Stems and Twelve Terrestrial Branches [which were ancient ways of counting] *. . .*’ However, while he previously used the 16x4 = 64 lines of the 17x17 boards, this time he uses the more recent 19x19 board to illustrate his origin theories.

Then, after more discussion about calendars, in an aside, he says something about *shu*, which was described before:

There is a word xiang shu *meaning the number of natural phenomena. This word also represents the material form and change which appear in the hexagrams for divination.* Xiang *is an image or phenomenon that emerges out of the change of all things.* Shu *is a definite number behind a phenomenon. For example, a handful of stones is called* xiang*, but counting the stones to determine that there are 20 of them is* shu*. Neither divination nor go can escape* xiang shu*.*

Besides counting, the character for *shu* also has the meaning of fate or destiny. It is used for some expressions or words such as ‘The result of the battle is decided at this point’ and ‘natural life span.’

Next, we get to how the Substance and Function of go are determined.

A Commentary on ‘Shi Qing Lu’ *contains the following description: ‘In divination, how man should act is determined only after the way (Dao) of heaven is inferred. Go clarifies the substance of Yin and Yang, the Five Elements, the directions of the earth, the pentatonic scale, the twelve-tone row (or dodecaphony), and the 24 seasons through their changes. This is the substance of go. With this substance, one detects the forward or backward expansion of the numbers, searches for an opportunity for change, infers the way (Dao) of heaven, earth and man, pursues reason for offense and defense, estimates the creation and control of the eight music*

instruments and the four seasons, then decides on the best course of action. This is the function of go.

Shirakawa explains that these were originally Buddhist terms which appeared during the Six Dynasties period [220-589 AD] and he adds, 'They comprise one of the central concepts of the Chinese world view in and after Neo-Confucianism . . . '

However, this statement may puzzle readers unfamiliar with Neo-Confucianism, or the context of the Song dynasty, when the *Mysterious and Profound Go Sutra* was written and the philosophical basis was being laid out for such books as the *Shi Qing Lu*.

A convenient guide is a detailed Internet article *Chu Hsi and Divination* by Kidder Smith, Jr., Peter K. Bol, Joseph A. Adler, and Don J. Wyatt, which is taken from their book, *Sung Dynasty Uses of the I Jing*. This is at http://www2.kenyon.edu/Depts/Religion/Fac/Adler/Reln471/Divination.htm

Because of his early Buddhist and Daoist training, Chu Hsi (Zhu Xi in the Pinyin spelling) was one of the most important Neo-Confucian philosophers of the Song [or Sung] period.

Smith, Bol, Adler and Wyatt write:

In regard to the I Jing*, Chu's insistence on the importance of divination (which along with sacrifice had been one of the ritual bases of early Chinese political culture) and the necessity of using it in the process of self-cultivation was a reappropriation of the original function of the* I *in the context of the specific intellectual and religious needs of the Southern Sung, as Chu understood them. . . . [B]y the time of the Southern Sung there was a growing disenchantment with politics as the focus of Confucian moral activity (te-hsing). The failure of the Northern Sung political reforms and the threat of military subjugation by northern tribes persuaded Chu Hsi and many of his contemporaries that the prerequisite to solving the problems of the Sung was the inner cultivation of moral character by the literati class. . . It is in this context that we must situate his approach to the* I Jing*….*

[As a letter to a friend suggests], the Introduction [of his book, I-hsüeh ch'i-meng *(*Introduction to the Study of the I*), published in 1186] is basically a divination manual, relying heavily on hsiang-shu [xiang shu], and specifically on Shao Yung [who was discussed*

earlier as the alleged discoverer of the Fu Xi hexagrams]. The first of its four chapters is a detailed study of the numerological and cosmological symbolism of the Ho-t'u *(Yellow River Chart) and the* Lo-shu *(Lo River Diagram)….*

In the second chapter of the Introduction Chu explores the Yin-Yang patterns by which the trigrams and hexagrams of the I *may be generated by the successive recombination of solid and broken lines. Here he also discusses the Fu-hsi and King Wen sequences of the trigrams, as well as Shao Yung's* Hsien-t'ien *(Prior-to-heaven) Chart. In the third chapter he discusses in detail the milfoil [yarrow] divination procedure, which he had reconstructed from the fragmentary version in the* Hsi-tz'u-chu *[The Great Commentary of the Book of Changes] (His version of this procedure has remained standard to this day.) [The original method is unknown and the casting of coins is thought to have begun in the 4th century BC]. And in the final chapter he explains how to derive a second hexagram from the one determined by the yarrow stalks, and how to interpret the transformation from the first to the second as a prognostication. Clearly, this book was intended to be a practical manual of divination, to be used by those learning the Way of the sages. . . .*

On page 143, Shirakawa quotes from Chu Xi's source in the *Great Commentary* on the *Book of Changes*:

There are five heavenly numbers. There are also five earthly numbers. When they are distributed among the five places, each finds its complement . . . It is this which completes the changes and transformations and sets demons and gods in movement.

To continue with *Chu Hsi and Divination*:

According to Chu, the primordial sage Fu-hsi [Fu Xi] created the I *in the form of hexagrams which he derived from patterns in nature. There was no text associated with it until the troubled time of King Wen (the founder of the Chou dynasty in the 11th century BC), who felt that people were no longer capable of interpreting the hexagrams directly. . .*

Furthermore, Chu later argued, the 'original intention' or purpose of the hexagrams was not philosophical but oracular: they were intended to be used to determine how to act in particular

situations, not to express moral principles. Among scholars ever since Wang Pi though, the I *had generally been used as textual support for whatever philosophy was being put forth. This, according to Chu, was not only likely to result in specious argumentation, it was also bound to neglect the real access to the 'mind of the sage' that the* I *could provide—a connection that could prove invaluable in the extremely difficult process of self-cultivation. Hence Chu Hsi's repeated dictum, 'The* I *was originally created for divination.'*

[Wang Pi (226 – 249 AD) was a Daoist who withdrew from society and the dry academic scholastic debates of the Confucians—his ideas that original non-being transcends all distinctions and descriptions anticipated the Neo-Confucians—see, for example, http://www.chebucto.ns.ca/Philosophy/Taichi/other.html#taoist]

This principle of interpretation led Chu to emphasize two things in his commentary on the I *(the* Chou-i pen-i*): the 'original meaning' (pen-i) and the 'original intention' (also pronounced pen-i). . . .*

Thus Chu Hsi uses the oracular function of the I *as a source of insight into the nature and functioning of the human mind—specifically into the central problem of the relationship between the still substance of the mind (its pattern) and its active functioning (its physical nature). While Ch'eng I saw the* I *as a repository of moral pattern, a source of values grounded in heaven-and-earth, Chu Hsi saw the* I *as an analogue of the mind of the sage that can be used to 'rectify' the ordinary mind. . . .*

Thus his work on the I *was an attempt to make available, not only to literati but also to common people, the wisdom and transformative moral power of the sages who created the* I*.*

Which, of course, includes go players.

With his agenda set, Shirakawa devotes the next section to a system explained by Yoshino Hiroko for generating numbers that was used by Shen Gua. As mentioned, Shirakawa doesn't explain that Shen used a corrupted form of the Five Phase system derived from the final form of the *He Tu* that was re-arranged from the one derived from the *Luo Shu* magic square, thus negating any attempt to assign relevance to his work.

On page 28, Shirakawa had previously quoted Shen:

To my thought, the Five Elements cannot be completed without earth. Water arises at one and is completed at six. Fire arises at two

and is completed at seven. Wood arises at three and is completed at eight. Metal arises at four and is completed at nine. Earth arises at five and is completed at ten. The total of these numbers is 55.

Primitive numbers	*1*	*2*	*3*	*4*	*5*
	Water	*Fire*	*Wood*	*Metal*	*Earth*
Generated numbers	*6*	*7*	*8*	*9*	*10*

On page 144, Yoshino says that each number from 1-9 has a complement so that 1 ‘links up’ 6 (or, as other writers have been translated, ‘tends to move towards’ 6 since one number is opposite the other in terms of *Yin-Yang*), 2 links up with 7, 3 with 8, 4 with 9 and 5 with 10. Odd numbers are *Yang*, even ones are *Yin* and the five pairs are the Five Elements.

[Thus,] Ten numbers were first allotted for the Five Elements, the next ten for the Ten Celestial Stems, and the next ten for musical pitches and weights and measures. . . .

Heaven = 1= water (in the Hall of the Heavenly Palace)
Earth 2 Fire
Heaven 3 Wood
Earth 4 Metal
Heaven 5 Earth
Earth 6 Water
Heaven 7 Fire
Earth 8 Wood
Heaven 9 Metal
Earth 10 Earth

[Thus,] 1, 2, 3, 4, 5 link up with 6, 7, 8, 9, 10
Therefore, they have the same distribution.

1-6 Water
2-7 Fire
3-8 Wood
4-9 Metal
5-10 Earth

Yashino writes in *Gogyo Junkan* that these combinations of numbers correspond to those of the Yellow River Map:

The Supreme Pole generates the two primary forces, the two primary forces generate the four images, and the four images generate the eight trigrams.

There are two rules in the evolution of the eight trigrams. When one is divided into two, Yang *(the unbroken line) is always placed on the right side,* Yin *(the broken line) on the left side. When an additional* Yin-Yang *is added, it is placed upon the one that was drawn before. . . .*

When the eight trigrams were generated from the four images, the combination of two lines evolved into three lines. Two lines represent 'you and me,' but three lines represent the addition of 'a third person.' This is how Imaizumi Hisao [in Ekkyo no Nazo*] explains the meaning of the evolution of lines: 'Great progress was needed for the recognition of a third person.'*

In other words, this is the (symbolic) creation from the two-lined four images (Cammann translates them as 'resemblances') of the younger, middle and elder Sons and Daughter trigrams that sit between the *yin* Mother of three broken lines and the *yang* Father with three solid lines in the trigram circle.

These statements can be further explained by quoting from Richard Wilhelm, an early translator of the *I Jing*. His full text is available at http://www.iging.com/intro/introduc.htm

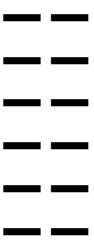
At the outset, the Book of Changes *was a collection of linear signs to be used as oracles. In antiquity, oracles were everywhere in use; the oldest among them confined themselves to the answers yes and no. This type of oracular pronouncement is likewise the basis of the* Book of Changes*. 'Yes' was indicated by a simple unbroken line (⚊), and 'No' by a broken line (⚋). However, the need for greater differentiation seems to have been felt at an early date, and the single lines were combined in pairs:*

To each of these combinations a third line was then added. In this way the eight trigrams came into being. These eight trigrams were conceived as images of all that happens in heaven and on earth. At the same time, they were held to be in a state of continual transition, one changing into another, just as transition from one phenomenon to another is continually taking place in the physical world. Here we have the fundamental concept of the Book of Changes. *The eight trigrams are symbols standing for changing transitional states; they are images that are constantly undergoing change. Attention centers not on things in their state of being—as is chiefly the case in the Occident—but upon their movements in change. The eight trigrams therefore are not representations of things as such but of their tendencies in movement.*

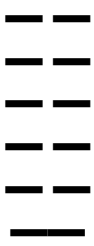
These eight images came to have manifold meanings. They represented certain processes in nature corresponding with their inherent character. Further, they represented a family consisting of father, mother, three sons, and three daughters, not in the mythological sense in which the Greek gods peopled Olympus, but in what might be called an abstract sense, that is, they represented not objective entities but functions. . . .

The sons represent the principle of movement in its various stages—beginning of movement, danger in movement, rest and completion of movement. The daughters represent devotion in its various stages—gentle penetration, clarity and adaptability, and joyous tranquility.

In order to achieve a still greater multiplicity, these eight images were combined with one another at a very early date, whereby a total of sixty-four signs was obtained. Each of these sixty-four signs consists of six lines, either positive or negative. Each line is thought of as capable of change, and whenever a line changes, there is a change also of the situation represented by the given hexagram. Let us take for example the hexagram K'un, THE RECEPTIVE, earth:



It represents the nature of the earth, strong in devotion; among the seasons it stands for late autumn, when all the forces of life are at rest. If the lowest line changes, we have the hexagram Fu, RETURN:



The latter represents thunder, the movement that stirs anew within the earth at the time of the solstice; it symbolizes the return of light.

As this example shows, all of the lines of a hexagram do not necessarily change; it depends entirely on the character of a given line. A line whose nature is positive, with an increasing dynamism, turns into its opposite, a negative line, whereas a positive line of lesser strength remains unchanged. The same principle holds for the negative lines. . . .

Wilhelm discusses some of the methods of change and then discourses further on themes that lie in the background of Shirakawa's book, but which are not fully explained:

The second theme fundamental to the Book of Changes *is its theory of ideas. The eight trigrams are images not so much of objects as of states of change. This view is associated with the concept expressed in the teachings of Lao-tse, as also in those of Confucius, that every event in the visible world is the effect of an 'image,' that is, of an idea in the unseen world. Accordingly, everything that happens on earth is only a reproduction, as it were, of an event in a world beyond our sense perception, as regards its occurrence in time, it is later than the suprasensible event. The holy men and sages, who are in contact with those higher spheres, have access to these ideas through direct intuition and are therefore able to intervene decisively in events in the world. Thus man is linked with heaven, the suprasensible world of ideas, and with earth, the material world of visible things, to form with these a trinity of the primal powers.*

This theory of ideas is applied in a twofold sense. The Book of Changes *shows the images of events and also the unfolding of conditions in* statu nascendi*. Thus, in discerning with its help the seeds of things to come, we learn to foresee the future as well as to understand the past. In this way the images on which the hexagrams are based serve as patterns for timely action in the situations indicated. Not only is adaptation to the course of nature thus made possible, but in the* Great Commentary *(pt. II, chap. II), an interesting attempt is made to trace back the origin of all the practices and inventions of civilization to such ideas and archetypal images. Whether or not the hypothesis can be made to apply in all specific instances, the basic concept contains a truth.*

The third element fundamental to the Book of Changes *are the judgments. The judgments clothe the images in words, as it were; they indicate whether a given action will bring good fortune or misfortune, remorse or humiliation. The judgments make it possible for a man to make a decision to desist from a course of action indicated by the situation of the moment but harmful in the long run. In this way he makes himself independent of the tyranny of events. In its judgments, and in the interpretations attached to it from the time of Confucius on the* Book of Changes *opens to the reader the richest treasure of Chinese wisdom; at the same time it affords him a comprehensive view of the varieties of human experience, enabling him thereby to shape his life of his own sovereign will into an organic whole and so to direct it that it comes into accord with the ultimate* tao *lying at the root of all that exists.*

Shirakawa next returns to the application of Nine Star Divination to the go board on page 146.

Because crucial diagrams are missing in the book, I can only quote the page in its entirety.

The forward and backward progression of the numbers in go
The total number of changes in go

This is a device for showing the placement of moves. A Commentary on 'Shi Qing Lu' explains this as follows:

The diagram [which seems to be missing] shows a go board with 361 intersections. After excluding the center, each quarter has 90 intersections. The numbers 1 to 10 are the forward movement. For

example, if we want the point 39, we go forward three points, then backward to nine. If we say 93, we first go backward to 9, then forward to 3.

In Chinese go books . . . the go board is divided into four parts. Starting clockwise from the lower left corner, the lower left is ping*, the upper left is* shang*, the upper right is* qu*, the lower right is* ru*.*

He has said on page 93 that, 'Originally *ping*, *shang*, *qu*, *ru* are four words that represent a rhyme using Chinese characters.' A Wikipedia.com article amplifies this explanation:

A Tone Name consists of Chinese tones derived from the traditional Middle Chinese [Tang era] tone classes, known as Ping Sheng*,* Shang Sheng*,* Qu Sheng*,* and Ru Sheng*, which in English in the linguistic literature, are sometimes called the level, rising, departing and entering tones. . . In modern dialects, syllables which derive from these four Middle Chinese tone classes may be split into two registers,* Yin *and* Yang*.*

Shirakawa continues on page 146:

The total of forward moving and backward moving numbers is 360. It equals the number of days of a year as well as the total number of changes of go.

This is apparently the 'Number' of go.

Next, on page 147, we have the 'Substances' and 'Functions' of go. Remember that the Song philosophers were deeply interested in the relationship between what they called the 'still substance of the mind (its pattern)' and 'its active functioning, physical nature.' Another, broader look is given by Chung-ying Heng, writing *in The Encyclopedia of Chinese Philosophy* at

http://www.routledge-ny.com/ref/chinesephil/samples.html

*The distinction between surface activities (form) and underlying structures (content) exemplifies the paradigm of 'substance and function' (*ti-yong*) in the metaphysical aspect of Confucianism. The surface activities are 'function,' suggesting action, operations, the application of a method, or the achievement of a purpose. The*

underlying institutions and standards are 'substance,' giving rise to the surface activities and supporting and sustaining them. Thus, in the processes of life, substance is realized in function and function in substance.

To put our understanding in focus, we can see that political and economic activities are functions of the institutions and productive forces of a society, which are the substance of these activities. Similarly, on the moral and social level or shell, the relationship between the social and the moral is one of substance and function.

A Commentary on Shi Qing Lu explains that go has three Substances through which one observes the changes of the 361 intersections of the go board. (Shirakawa says he omitted the pictures in this section).

Wu yin jie lu lu ju—*the pentatonic scale is distributed into the twelve-tone row, which is integrated into the 72 weeks.*

Wu xing xie li ji ju—*The five elements (metal, wood, water, fire, and earth) are distributed into the four seasons and the 72 weeks of the year. One can observe the changes, following the principle of the creative and control cycles of the five elements throughout the year.*

Wu wei cheng hui hu ju—Wu wei *means the five directions of the earth (east, south, west, north and center) as well as the numbers of the five elements. It also represents metal, wood, water, fire, and earth. These* wu wei *in the nine directions are multiplied by* hui shu*. (*Hui shu *is said to be divided into 19 characters such as* tian *(heaven),* di *(earth), and* ren *(man), but its meaning is a mystery.)*

A Commentary on 'Shi Qing Lu *comments: 'The above pictures appear in* Yi Zhi *written by Wang Zhongxuan. Therefore, the number of the chaotic sources of go is 72, eight times nine, which includes 361 and generates eternal changes. This is a fundamental principle of mathematics as well as the essential point of go.'*

Go also has three functions:

San cai ding—San cai*, meaning Three Powers, refers to Heaven, Earth, and Man. Heaven, which expresses itself by the changes in the weather in The Nine Parts of Heaven. Earth, which expresses itself by the changes of the directions of the Eight Winds. Man expresses himself by music or the instruments he has made. The Three Powers change unceasingly in the same way as go eternally changes, and this is the substance and function of go.*

San yuan qi li *[Shirakawa says he omits the pictures]—The 24 seasons are distributed into the forward and backward progression of numbers and the nine directions.*

San chen jia lin ju *The maneuvers of go are based on the laws of the Nine Palaces of the Luo River Map. San Chen refers to three of the Ten Celestial Stems, namely* yi*,* hing*, and* ding*. These are distributed into* zi*,* yin*,* chen*,* wu*, and* shen *in the Twelve Branches to observe the changes.*

The point [of these last sections] is that with respect to the number of go, the Three Powers are regarded as three, the four seasons are divided into two parts, and the total number of changes is 361.

And that is the end of Shirakawa's discussion of these divine matters.

Part X

Ancient and Modern Times: Fu Xi Hexagrams and Leibniz

Next, Shirakawa moves on to more modern times. He has already said in the Introduction that:

Go also had a strong connection to subjects that required intensive research, such as ontology or philology, and even to cutting-edge scientific research, such as Integrated Services Digital Networks (ISDN) or molecular biology that borders on the essence of life itself.

At the end of Chapter Two, he returns to these subjects, although he seems to have forgotten about ontology, philology and the ISDN.

On page 149, he begins by confusing Alexander Graham Bell's invention of the telephone with that of the telegraph. He then mysteriously writes that the Morse Code was the 'first Western use' of the binary system of long and short dashes of the 64 hexagrams of the *Book of Changes*,' and remarks how, 'In go, black and white compete in a game' so that, 'These share a common principle.'

He also concludes that there is a 'strange coincidence between the *Book of Changes* and DNA' and that ' . . . the most advanced science in our modern age agrees with the philosophical ideas of China dating back 4,000 years. The 64 patterns of codons which consist of three of the four bases, forming the basis of life, closely resemble the 64 hexagrams for divination.'

What Shirakawa might be thinking about is the recent outpouring of books, such as *DNA and the I Jing* by Johnson Yan, that questionably try to associate Western science with Eastern mysticism.

He then says he agrees with Needham, who suggested that it was 'an amazing thing' that thinkers starting from such different foundations came up with such similar systems. For example, Shirakawa suggests that Liebniz's belief that the 'substance of the

world is a discrete entity, namely a monad, and that the monad is the source of every being, the fundamental being of the universe,' might have been inspired by his interest in Confucius and Chinese thought.

Then he brings up the famous hypothesis that Liebniz's work on binary arithmetic might have been inspired by a diagram of the Fu Xi hexagrams, that were given to him by a Jesuit missionary.

However, Cammann suggests that the inventions of hexagrams and binary arithmetic were the product of two cultures' completely different systems of thought. Noting in his Dualism article that, as mentioned, the Chinese like to think in terms of eight like we do of dozens, he wrote:

. . . That exchange of the second trigram with the eighth, in order to make the fourth set conform with the altered numbering of the Lo Shu, had another important sequel. Apparently, without realizing it, whoever made that change managed to transform the old circular ordering of the trigrams into a binary cycle. For anyone who understands how this operates, these trigrams could now be read as representing the numbers from 0 to 7, while the related hexagram cycle would produce from its similar pattern the numbers from 0 to 63.

His footnote adds:

To read the trigrams as examples of binary notation, the value of 0 is given to any split line, 1 to a first solid line on the outside, 2 to a second (middle) solid line, and a 4 to a third (inside) solid line, reading the trigrams from the outside in. Beginning with full yin at the bottom of the circle and passing up the right side, then dipping back to the bottom and passing up the left side to end at full Yang, the result would be: 000, 001, 020 or 2, 021 or 3, 400 or 4, 401 or 5, 420 or 6, and 421 or 7. For reading the Fu Hsi hexagrams by the same method, a split line would again mean 0, and the solid line—from outermost to inmost—would have the values of 1, 2, 4, 8, 16, and 32.]

He continues:

However, in order to perceive the binary progression contained in these two sets, one must read the lines in each of the signs beginning at the outside of the circle—that is, from the top down—

exactly opposite to the traditional method for reading them. Thus it is doubtful that any Chinese ever came upon it. Furthermore, the numbering from 0 to 7—or from 0 to 63—would have been meaningless. In order for the people of Old China to realize that the arrangers of the trigrams and hexagrams ascribed to Fu Hsi had actually achieved an alternative system of numeration, they would have had to have known, at least by Han times, the concepts of place value and the zero; but, although they had a sense of place value since very early times, they do not seem to have known abut the zero until the eighth century AD, hundreds of years after the invention of these particular trigram and hexagram sets.

Part XI

Summation

In summary, along with Buddhist ‘Substances’ and ‘Functions,’ the simple game of go has attracted such extreme Daoist, Confucian and ‘universal naturalistic’ interest that it has enticed people into seeing everything from mythical, mystical and mathematical symbolism to metaphors for love, war, business and politics and much more taking place on its boards.

But that does not necessarily mean that the game was originally associated with magical divination and/or the mathematics of calendars, as is commonly thought.

As has been seen, the operations of the diviners and operations of playing go, as well as the respective boards, seem to be very different. They might have been connected, of course, but at this time, there is no evidence that this was so, and perhaps there never will be.

However, Shirakawa writes as if it was a proven fact that they were, and by obfuscating his sources, he does a great disservice to those new to these subjects. His book certainly contains a lot of interesting information, but it would have been far better and much more interesting if he had honestly presented the story of how thoughts about magic squares, trigrams, hexagrams and the like became attached to go over the course of history.