

# Thoreau's Concept of Spring: A Comparative Study with the Japanese 24 Seasonal Periods and 72 Spells\*

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## Introduction

What is the concept of spring? You ask this apparently simple question, and you will get a thousand different answers. But I think few of them will clearly explain what spring means. This is in fact a complex question, involving the relation between our life and the Earth. Then let me ask a simpler one: When does the spring begin? The American news media has one answer to this. On the morning of the Spring Equinox all the TV news in America begin with a cheerful greeting: "Hi, folks, this is the beginning of spring..." But do we all agree with this? A Japanese TV broadcaster would declare the beginning of spring on February 4th. I would like to say that the American news media represents the modern concept of spring, while Japanese news media represents the classical concept. This is not an East-West difference, but a classic-modern difference. We know that the Celtic calendar is similar to the Japanese classical calendar. Then how do you define the concept of spring, and when does it begin and end? Apparently, it was not easy for Henry David Thoreau in his *Journal* and *Walden* to find a particular day when the season of spring begins. In this paper I will look into Thoreau's *Journal* and *Walden*, and see how he comes out of a series of spring signs.

Let me first introduce two kinds of classical Japanese calendars. One is called 24 Seasonal Periods, or simply 24SP, or Nijushi-sekki in Japanese. The other is called 72 Seasonal Spells, or simply 72 Spells, or Shichijuni-ko in Japanese. The 24SP divides one year into 24 periods, each consisting of about 15 days. The 72 Spells, on the other hand, divides one year into 72 segments, each of which consists of about five days. It is fairly close to the Western concept of a week, but the difference is that each segment in the 72-spell system has a unique name which corresponds to a particular seasonal phenomenon. So you can have a chain of seasonal images which spans one year. It is a

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\* This paper was originally presented at the Art Festival in Hot Springs, Arkansas, on November 5, 1998, and has been revised on October 18, 2013, as a part of the report submitted to the Center for Asian and Pacific Studies, Seikei University.

necklace of seasonal beads. When I read it aloud, a lady from Finland said, “Wow, it’s a poem of the Earth.”

With these two kinds of calendars in the backdrop, I would like to go through Thoreau’s *Journal* (from February to May, 1852) and *Walden*, and compare his concept of spring with the Japanese classical view. I am not implying that Thoreau’s *Journal* represents the modern seasonal view. On the contrary, we will find a surprising affinity between Thoreau’s observations and the Japanese classical seasonal view. There are of course a variety of classical seasonal views in the world, but in this paper I only limit it to the seasonal views represented by the Japanese 24 Seasonal Periods and 72 Spells. This paper also intends to point out some philosophical implications of seasonal words or season-words, which are found in haiku and renku in Japan.

It is a common belief in America that haiku is nature poetry. I believe that to say haiku is nature poetry means that a haiku poet lives one’s life as a part of the ecosystem, feels the force of it, and poetically praises the joy of it. It was the style of Thoreau’s life, which enabled him to feel the seasonal rhythm of the Earth.

### **1. Japanese 24 Seasonal Periods and 72 Spells**

To begin with, I would like to introduce the basic framework of the Japanese classical calendar, which is shown in the appendix. The appendix 1 shows the 24SP, and appendix 2 gives a combination of the 24SP and the 72 Spells. Bound together, they provide a framework for the book of season-words, or *Saijiki*, which is in common use among Japanese haiku and renku poets.

The total structure of the 24SP is first divided by the eight landmark points on the celestial longitude; four “Comings” (such as the Coming of Spring, Coming of Summer, Coming of Autumn, and Coming of Winter), two “Equinoxes” (such as the Spring Equinox and Autumn Equinox), and two “Solstices” (such as the Summer Solstice and Winter Solstice). Each of the eight divisions is further divided into three segments by meteorological phenomena, mainly consisting of various modes related to water and heat. In fact, water and heat are the two key factors to understand the meaning of the 24SP system. The three modes of water are superimposed against the polarity of the heat in the atmosphere. The water represents the substance of life, and the heat the source of life force. Among the 24 periods, the first eight stand for the eight landmark points on the celestial longitude (as given above); seven have to do with the modes of water (Rain

Water, Grain Rain, White Dew, Cold Dew, Frost Fall, Light Snow, and Heavy Snow); and six are attributed to the heat (Increasing Heat, Slight Heat, Intense Heat, Sporadic Heat, Moderate Cold, and Severe Cold). The remaining three characterize the behavior in the animal kingdom (Out of Hibernation), the light in the atmosphere (Serene and Bright), and the beginning of the agricultural season (Grain Planting).

The concept of the 24SP is based on the Yin-Yang philosophy. The seasonal cycle is thought to be created by an increase or decrease of the Yin-Yang elements in the atmosphere, which roughly corresponds to the rise and fall of the annual temperature in the northern hemisphere. This Yin-Yang wave cycle has twelve aspects. The extreme high of Yin, or the extreme low of Yang, is called “Kon,” while the extreme high of Yang, or the extreme low of Yin, is called “Ken.” According to the Yin-Yang philosophy, “Fuku,” which is the point when the Yang element begins to increase, is the beginning of spring. A skeptic might want to see a clear similarity between the Yin-Yang wave pattern and the actual records of annual temperature in Tokyo. Most places in the northern hemisphere have the similar pattern of annual temperature. The average temperature comes down to the lowest during the period of the Severe Cold, which starts from January 20. Actually the end of January is the coldest time, and after that the temperature starts rising. The Coming of Spring usually takes place during the period of resurging heat, which corresponds to Kon. The concept of spring and its beginning are clearly shown as such in the 24SP system.

Now the 72 Spells are derived from the 24SP by dividing each of the 24 periods into three segments. Each “spell” consists of about five days and comes with a unique name which corresponds to a seasonal phenomenon, as shown in Appendix 2.

## **2. The Concept of Spring in Thoreau's *Journal***

Now I would like to begin my search for the meaning of spring in Thoreau's *Journal*. It is most intriguing that he was very sensitive to the seasonal effects on his life, and it is clearly shown by the quality and quantity of his records of seasonal phenomena. It is also a remarkable example of a highly intellectual experiment in search of the meaning of life on this planet.

In 1852, for example, Thoreau's references to spring signs start appearing around February 4, “Feb. 4. Wednesday. A mild, thawy day...Though the pure snow is so deep around, the air, by contrast perhaps with the recent days, is mild and even balmy to

my senses,...These nights are warmer than the days; but by morning it is colder.” Then Thoreau records an increasing number of spring signs as time goes on. “Feb. 5. ...The sky last night was a deeper, more cerulean blue than the far lighter and whiter sky of to-day.” “Feb. 6. ...It is still thaw. A mistiness makes the woods look denser, darker, and more imposing.” “Feb. 7. The warmer weather we have had for a few days past was particularly pleasant to the poor whose wood-piles were low, whose clothes were ragged and thin.” “Feb. 8. ...Night before last, our first rain for a long time; this afternoon, the first crust to walk on.” “Feb. 9. ...This is our month of the crusted snow...The crust is melted on the south slopes...” The same day he discovers that sap is already running in the tree trunks. “When I break off a twig of green-barked sassafras, as I am going through the woods now, and smell it, I am startled to find it fragrant as in summer...For the first time this many a year, I tasted there some of the sweet froth which had issued from the sap of a walnut or hickory lately cut.”

A haiku poet who is familiar with the Japanese book of season words would be delighted to find that Thoreau observed these underlined spring signs starting from February 4, which is exactly the first day of the Coming of Spring in the 24SP. However, although his senses are keenly tuned to pick up many spring signs, his mind is set to interpret them in the conventional framework of winter. The Japanese book of season words would classify all these underlined words in the early spring, but Thoreau is not sure yet.

“Feb. 10. ...We have none of those peculiar clear, vitreous, crystalline vistas in the western sky before sundown of late. There is perchance more moisture in the air. Perhaps that phenomenon does not belong to this part of the winter.” Here we know that his mind is still treading in the winter. Right after this sentence, he reports that he found on the day before “some hundreds of honey-bees, dead and sunk half an inch below the crust.” On February 13 he tells a story about bee-hunting which he heard from a man called Rice. He is very much amused by the story, and says, “I love best the unscientific man’s knowledge; there is so much more humanity in it. It is connected with true sports.” “Feb. 18. ...The mosses on the rocks look green where the snow has melted. This must be one of the spring signs, when spring comes.” “Feb. 19. The sky appears broader now than it did. The day has opened its eyelids wider. The lengthening of the days, commenced a good while ago, is a kind of forerunner of the spring.” I must remind you that Thoreau does not think it is spring yet. “Feb. 20. ...The last two or three

days have been among the coldest in the winter, though not so cold as a few weeks ago....I notice,...., many little rabbit-paths in the snow....I saw a mole (?) run along under the bank by the edge of the pond,..." "Feb. 22. ...A mild, misty day." "Feb. 24. I am reminded of spring by the quality of the air. The cock-crowing and even the telegraph harp prophesy it, though the ground is for the most part covered with snow. It is natural resurrection, an experience of immortality. Observe the poplar's swollen buds and the brightness of the willow's bark....The very sound of men's work reminds, advertises, me of the coming of spring....They had caught a fine parcel of pickerel and perch. The perch especially were full of spawn. The boy had caught a large breem which had risen to the surface, in his hands." Even after all these spring signs have been accumulated, he still thinks it is part of winter. "Feb. 27. The mosses now are in fruit--or have sent up their filaments with calyptrae.... It is a moderately cool and pleasant day near the end of winter."

We must remember there are two distinct meanings to the word "spring signs." First, it means that spring has come. Second, it also means that the spring is on its way. His records of "spring signs" continue on and on, but he only means that spring is on its way. On March 20, which was the day of the Vernal Equinox in 1852, he reviews the winter birds he has observed, yet I think he still thinks March 20, which was the Spring Equinox, belongs to winter. "March 20. As to the winter birds,--those which came here in the winter,--I saw first that rusty sparrow-like bird...; then I saw, about Thanksgiving time and later in the winter, the pine grosbeaks...; then, in midwinter, the snow bunting...And now, within a day or two, I have noticed the chubby slate-colored snowbird." His mind is still hovering in the winter sky, although it's almost the end of winter. Thoreau is looking for, or longing for spring.

It is true that around February the waves of warm spells come and go, and it sometimes gets as cold as winter. In the 24PS this is a typical phenomenon in the early spring, but Thoreau apparently is definitely sure it is part of winter. His records show that he was aware of this phenomenon from the middle of February up to the end of March. He first records a mild thawing day on February 4, and a week later on February 11 he experienced a cold weather. "Feb. 11. Wednesday. When the thermometer is down to 20 in the morning, as last month, I think of the poor dogs who have no masters." "March 20. ...It is cold as winter to-day, the ground still covered with snow, and the stars twinkle as in winter nights." Walden is located at 42 degrees north, almost as north as

Sapporo in Japan, and spring is late there. These sentences in the comparative mood can imply that he thinks it is already spring.

Expectation and anxiety for spring has been suppressed so long that Thoreau expresses his emotion in a poetic fashion as follows. “Feb. 24. I am reminded of spring by the quality of air. The cock-crowing and even the telegraph harp prophesy it,...It is natural resurrection, and experience of immortality.” “Feb. 27. ...If rivers come out of their icy prison thus bright and immortal, shall not I too resume my spring life with joy and hope? Have I no hopes to sparkle on the surface of life’s current?” “March 4. ...The snow is melting on the rocks; the water trickles down in shining streams; the mosses look bright; the first awakening of vegetation at the root of the saxifrage.” “March 9. ...When the frost comes out of the ground, there is a corresponding thawing of the man. The earth is now half bare. These March winds, which make the woods roar and fill the world with life and bustle, appear to wake up the trees out of their winter sleep and excite the sap to flow.” “March 21. ...The ice no sooner melts than you see the now red and yellow pads of the yellow lily beginning to shoot up from the bottom of the pools and ditches, for there they yield to the first impulses of the heat and feel not the chilling blasts of March.” This is a marvelous ode to spring, and this makes his Journal unique as a poetic treasure chest of season words.

To be comprehensive and precise about Thoreau’s concept of spring, I should look into all the spring sections in the *Journal*, but it is sufficient to look into a few more sections to grasp the concept.

On March 7, 1853, for example, Thoreau asks the following question: “What is the earliest sign of spring?” This is a crucial question to ask, and I am happy to find that Thoreau and I now share an interest in the same project after all. This question is followed by many of his hypotheses. “The motion of worms and insects? The flow of sap in trees and the swelling of buds? Do not the insects awake with the flow of the sap? Bluebirds, etc., probably do not come till insects come out. Or are there earlier signs in the water?--the tortoises, frogs, etc.” This passage gives me an idea about his frame of reference or the directions of his feelings. He thinks the key element is the water. The following three days the Journal is full of references to spring signs.

(March 8, 1853) “Saw some very large willow buds expanded (their silk) to thrice the length of their scales,...They look more like, are more of, spring than anything I have seen. Heard the phoebe, or spring note of the chickadee, now, before any spring bird has

arrived.” “Heard the first flies buzz in the sun on the south side of the house.” He rode to Saxonville with F. Brown to look at a small place for sale. Now he feels decisive about spring. “On wheels in snow. A spring sheen on the snow...I know of no more pleasing employment than to ride about the country with a companion very early in the spring.”

(March 9,1853) “So the relaxed or loosened (?) alder catkins and the extended willow catkins and poplar catkins are the first signs of reviving vegetation which I have witnessed. Minott thinks,...that the bark of the striped squirrel is the, or a, first sure sign of decided spring weather.”

(March 10,1853) “This is the first really spring day. ...the sound of distant crows and cocks is full of spring....Something analogous to the thawing of the ice seemed to have taken place in the air. At the end of winter there is a season in which we are daily expecting spring, and finally a day when it arrives....Methinks the first obvious evidence of spring is the pushing out of the swamp willow catkins, then the relaxing of the earlier alder catkins, then the pushing out of skunk-cabbage spathes (and pads at the bottom of water). This is the order I am inclined to, though perhaps any of these may take precedence of all the rest in any particular case.” He finds a young tortoise on the rail, and wonders where and when it was hatched. He hears the first bluebird, and he sounds absolutely sure about the arrival of spring: “What was that sound that came on the softened air? It was the warble of the first bluebird from that scraggy apple orchard yonder. When this is heard, then has spring arrived.” Now finally we have his words about definite signs for the arrival of spring. It was two weeks earlier than Spring Equinox.

His description of the flooded meadow on March 8, among other things, captures most vividly the life force of the earth. “The distant view of the open flooded Sudbury meadows, all dark blue, surrounded by a landscape of white snow, gave an impulse to the dormant sap in my veins....Waters are at length, and begin to reflect, and, instead of looking into the sky, I look into the placid reflecting water for the signs and promise of the morrow...Now, when the sap of the trees is probably beginning to flow, the sap of the earth, the river, overflows and bursts its icy fetters. This is the sap of which I make my sugar after the frosty nights, boiling it down and crystallizing it.”

On March 2, 1859, he talks about the beginning of spring, explaining how people anticipate spring before it actually comes. “March 2, 1859. We thus commonly antedate the spring more than any other season, for we look forward to it with more longing.

We talk about spring as at hand before the end of February, and yet it will be two good months, one sixth part of the whole year, before we can go a-maying. There may be a whole month of solid and uninterrupted winter yet, plenty of ice and good sleighing. We may not even see the bare ground, and hardly the water, and yet we sit down and warm our spirits annually with this distant prospect of spring. As if a man were to warm his hands by stretching them toward the rising sun and rubbing them. We listen to the February cock-crowing and turkey-gobbling as to a first course, or prelude.” If we take this literally we may speculate that Thoreau expects the arrival of spring toward the end of March or the beginning of April. This roughly corresponds to the chapter of spring in *Walden*.

Thoreau’s *Journal* is a running commentary on the on-going parade of seasonal phenomena passing in front of him without a break. This parade is going on in front of everybody and all the time. Natural time has no break nor mark that inform us about the beginning of spring. When Thoreau keeps his *Journal*, he obediently observes seasonal phenomena and correctly records them with his feelings about them without imposing a deductive seasonal framework. Thoreau’s *Walden*, on the other hand, has a chapter called “Spring,” a short chapter that contains only 21 pages. It is remarkably short compared to the chapters on winter, which amount to 61 pages. The number of pages does not matter, but what is important here is that Thoreau had to impose his framework of spring to create this chapter in *Walden*. The chapter on spring begins with descriptions of the melting of ice in Walden Pond, followed by his observations of thawing sand. His records on these two seasonal events take up about a half of the chapter, which implies his enormous interest in geological phenomena.

What is Thoreau’s concept in *Walden* concerning the beginning and the end of spring season? His references concerning spring do not have systematic dates, so we must make a reasonable guess. Generally speaking, the melting of ice in lakes or ponds bears significant meaning to the life of people who have to endure a long severe winter. He says, “Every incident connected with the breaking up of the rivers and ponds and the settling of the weather is particularly interesting to us who live in a climate of so great extremes.” As to when Walden Pond is completely open, he has his records which cover the span of seven years, starting from the year before he moved into his cottage there. “In 1845 Walden was first completely open on the 1st of April; in ’46, the 25th of March; in ’47, the 8th of April; in ’51, the 28th of March; in ’52, the 18th of April; in ’53, the



23rd of March; in '54, about the 7th of April." (*Walden*, 303) Somehow he missed the information about '48 and '49. The earliest date is the 23rd of March, while the latest is the 18th of April. He also says, "I never knew it (Walden Pond) to open in the course of a winter," which implies that the earliest date we can get concerning the beginning of spring is the 23rd of March.

So when exactly does he think spring begins? Since the opening of the pond is an important matter, he would naturally pay close attention to the temperature change of the water. Sure enough, he has records of water temperature of Walden Pond and Flint's Pond. "A thermometer thrust into the middle of Walden on the 6th of March 1847, stood at 32 degrees, or freezing point; near the shore at 33 degrees; in the middle of Flint's Pond, the same day, at 32 1/2 degrees; at a dozen rods from the shore, in shallow water, under ice a foot thick, at 36 degrees." Flint's Pond usually breaks open a week or ten days before Walden Pond, because it is shallower. On the 24th of February, 1850, when he spent a day on Flint's Pond, he was surprised by the booming sound of cracking ice, which indicates a change of temperature. Thoreau shares in *Walden* his scientific knowledge concerning the process of how ice in the pond melts in the warm spring sun, but it is regrettable that he did not record accurate dates of his observations.

Allow me to continue my speculation on Thoreau's concept of spring in terms of its beginning and end. The earliest date recorded in the chapter of spring in *Walden* is the 24th of February, when he was surprised by the booming sound of cracking ice in Flint's Pond; and the latest date the 3rd or 4th of May, when he observes the sulfur-like pollen of the pitch pine, among other things. The time span covered in this chapter roughly corresponds to, in the 24SP, the period between the Rain Water and the Grain Rain. However, this period does not exactly correspond to what he says about spring in his *Journal*. On March 2, 1859, he explains why "we commonly antedate the spring more than any other season," and here we find that we can safely guess that Thoreau expects the season of spring to begin around the end of March or the beginning of April. It is also quite amazing to know that Thoreau in his *Journal* starts anticipating spring around February 4 in 1852, and he is sure about the arrival of spring when the pond is open, which took place on April 18 in that year. So I must say that the first half of the chapter of spring in *Walden* is actually about "pre-spring," and spring lasts for only about a month.

Now let me draw your attention to the difference between pre-spring and spring.

I would like to point out that the beginning of pre-spring roughly corresponds to the Coming of Spring in the 24SP. This means that what Thoreau interpreted as signs of pre-spring are signs of early spring in the 24SP. This raises some philosophical implications concerning our cognition and frame of interpretation, which will be discussed in the following section.

### 3. Philosophical Implications

The apparent discrepancy between Thoreau's concept of spring and that of the 24SP is grounded on not only a geographical but also a cultural difference. The geographical difference is obvious, so let me talk about the cultural difference.

The word, "spring sign" in the *Journal* has two meanings. It can mean either the sign for pre-spring or the sign for the real spring. The concept of pre-spring is so concrete that it creates a certain ambiguity. Pre-spring is a period where he starts longing for spring, but it is still a part of winter. If it is not a part of spring, why not just call it late winter. It is an imaginary spring that only exists in the mind. It is a hope to live for. It is like the concept of heaven or paradise. We usually think it exists somewhere distant or in the next world. We would be greatly relieved if we think this world is heaven and heaven exists nowhere but here on the Earth. What if Thoreau had thought that it was not pre-spring but early spring? He could have been much happier with this idea of early spring.

The concept of pre-spring is created in the human mind, and I would call it a human-centered seasonal view. It is a seasonal view based on culture. Our observation of seasonal signs can be refined as time goes on, but the number of signs is infinite and the kinds of seasonal signs vary every year and everywhere. We would have to pick one typical seasonal sign out of all those variable signs, and attribute to it the landmark of spring, but it is meaningless as long as you do not have a fixed basis. No matter how much you refine the quality of observation, the objects of observation are treacherous after all. The 24SP, on the other hand, has nothing to do with our cognition but with astronomical facts and meteorological conditions. Of course we come to this awareness through our scientific search, but once those seasonal landmarks are set, the calendar goes on with the movement of the solar system. So it is an Earth-centered seasonal view. Thoreau says in his *Journal* that everything follows the sun. I believe he was on his way to developing his own concept of 24SP or 72 Spells.

The concept of spring in Thoreau's *Journal* could be a case of mismatch between cognition and his frame of reference. The mass of spring signs he records in his *Journal* are interpreted as belonging to the "adhesive" winter. In *Walden*, however, he recaptures those spring signs within the framework of spring. The hope and pain he experiences during the pre-spring period seems to rise from the schism between his cognition and the cultural frame of spring. In the 24SP system, one single sign would be enough to tell us of the arrival of spring. The accumulating spring signs in Thoreau's *Journal* make me wonder just how many signs he would need before he could confirm the arrival of spring. For Thoreau spring does not begin on a certain day, but it comes after a long transitional period with profusion of spring signs. For him spring is as much an internal landscape as it is an external phenomenon. On March 30 he writes, "Though the frost is nearly out of the ground, the winter has not broken up in me. It is a backward season with me. Perhaps we grow older and older till we no longer sympathize with the revolution of the seasons, and our winters never break up." He was only 35 when he wrote this, but he sounds like an old man.

Spring is not simply an accumulation of facts. There is no way to know just how many, and what kinds of spring signs we need to determine the arrival of spring. It is theoretically impossible to restore the whole reality out of all the fragmentary facts we can observe. Thoreau could not possibly observe, not to mention record, all the spring phenomena which fluctuate every year. Seasonal phenomena are chaotic beyond human control and prediction. An observant, inductive mind is always appreciated and precious, but a deductive framework is divinely useful for our harmonious life with the seasonal cycles. The 24SP and 72 Spells are a set of systems to create order out of chaotic actuality. It has served well for the purpose of agriculture, and it will also be meaningful in future ecological civilizations.

Spring is primarily a geo-physical fact rather than a personal experience. There lies a crucial difference between objective realism and homo-centrism. Spring in the 24SP begins on the 4<sup>th</sup> or the 5<sup>th</sup> of February every year. Spring is punctual, and the explanation for this is simple. The Earth goes around the Sun, and the Earth's axis is tilted, which is the astronomical mechanism of seasonal changes on our Earth. One cycle of the Earth's rotation around the Sun is divided into 24 segments, each of which is allotted to 15 degrees or about 15 days. When the Spring Equinox is zero degrees celestial longitude, spring begins at 315 degrees. Nothing mental can change this. In

other words, it is because everything follows the sun.

However, we know that the metaphysics behind the concept of spring is the Yin-Yang theory, which places significant value on the resurging aspects in the Yin-Yang cycle. Modern seasonal views, on the other hand, hold primary importance on the extremes of temperature. Thus, summer is centered round the upper extreme, while winter around the lower extreme. Consequently, the beginning of spring is pushed back to the Spring Equinox.

The amount of heat in the northern hemisphere starts rising, at least theoretically, from the day after the Winter Solstice, when daytime gets longer. However, we actually experience the coldest period for about 45 days after Winter Solstice. The reason for this is heat conduction. The heat from the sun needs media to get evenly spread over the Earth. The air, water, and land are the media, and the time it requires for them to transmit the heat to the middle range in the northern hemisphere is about 45 days. It is when the Earth starts feeling the heat. The change occurs to the elements of the Earth's life system which constitutes the air, water, and land. The plant and animal kingdoms respond to the change, since they maintain their original relation with the Earth's life system. Yes, everything follows the sun. This is the Earth-centered seasonal view. I believe Thoreau found it, because he could feel the pulse of the plant and animal kingdoms.

I would like to argue for the value of the 24SP and 72 Spells. Ecology has made us realize that our Earth is a life system by itself. The key element to this is water and a key factor the heat. Water changes its form at zero degrees Celsius, which holds a crucial meaning to all life forms on the Earth. Active life is sustained by the liquid form of water which mediates all bio-chemical reactions. In the central part of Japan and New England rainfall is observed sometime in February. The 24SP has "Rain Water" between February 19 and March 4. The "Rain Water" means that the water in the atmosphere turns from solid to liquid and the Earth's life system is ready for action. In other words, the Earth-Life cycle is literally warming up.

What is the relation between the Winter Solstice and the Coming of Spring: Why is not the Winter Solstice the beginning of spring? Thoreau refers to the lengthening of the days on February 19: "the lengthening of the days, commenced a good while ago, is a kind of forerunner of the spring." Although the day gets longer after the Winter Solstice, the temperature does not rise until the Coming of Spring. This is commonly

true in the northern hemisphere. In the areas like Central Japan or New England, where four seasons are clearly marked and winters are cold enough to have fair amount of snow, the rising temperature at the beginning of February has a deep meaning to life in the plant kingdom. After the Winter Solstice the temperature still keeps going down until it hits its bottom at the end of January. It usually takes about 45 days or 45 degrees of celestial longitude for the “re-birth” of the sun to be connected to the rise of temperature. This time lag has to do with the slow conduction of heat in the atmosphere, the oceans, and the land. The temperature starts rising at the beginning of February, and this is considered as the beginning of spring in the 24SP. Being a photo-synthetic life form, plants are of course sensitive to the lengthening daylight, but they cannot unfold their buds until they are sure that the temperature does not fall back under zero degrees Celsius. If the buds unfold too early, the soft fresh leaves will have to face the risk of frost or snow. So as soon as the temperature rises and thawing begins, the sap starts rising and the swelling buds wait for a stable warmer weather to settle in. The maple sugar gets harvested in early February.

The typical pattern of a climograph in the northern hemisphere, particularly around the mid-latitude zone, shows the lowest temperature of the year in January and the highest in July. It is commonly observed that the temperature starts rising at the beginning of February and begins to lower in early August. This pattern of temperature change, combined with the daylight length, is imprinted in the annual life cycle of the plant kingdom, which holds immediate influence on the animal kingdom. This pattern is created by the astronomical mechanism of the Sun and the Earth. The scientific study of global warming has made it clear that the Earth-Life cycle is so sensitive to the heat, that our everyday life activities can upset the balance. It is time to come out of the human-centered seasonal view and live with the Earth-centered seasonal view.

This is the 24SP's version of the meaning of spring. Spring means the resurgence of heat energy in the atmosphere, which is a sign of the rising life force. Most mid-latitude areas will share a common pattern of seasonal change. New England (Walden Pond, 42.30 N) and Japan (Sapporo, 43 N) are more or less on the same latitude. In other words, New England and Japan will enjoy the coming of spring about the same time of the year. Incidentally, this is clearly shown in Thoreau's *Journal* as well as in *Walden*.

We could learn a new way of seeing the world from the point of view of the Earth-Life cycle. Today all of us know the importance of an ecological worldview. However,

an ecological philosophy has been nurtured in Japanese poetic forms, such as haiku and renku for hundreds of years. I would like to say that the season-words could be an important part of our global poetic culture in the 21st century, because they could help us stay in contact with the original rhythm of the Earth-Life cycle. Basho said it is essential for poets to liberate themselves from the ego-centered mind and return to the original relation with nature, and stay in touch with the creative forces of the universe.

Thoreau might have appreciated the Japanese 72 Spells. The following passage in his *Journal* eloquently spells out its essence:

(April 18, 1852) For the first time I perceive this spring that the year is a circle. I see distinctly the spring arc thus far. It is drawn with a firm line. Every incident is a parable of the Great Teacher. The cranberries washed up in the meadows and into the road on the causeways now yield a pleasant acid.

Why should just these sights and sounds accompany our life? Why should I hear the chattering of blackbirds, why smell the skunk each year? I would fain explore the mysterious relation between myself and these things. I would at least know what these things unavoidably are, make a chart of our life, know how its shores trend, that butterflies reappear and when, know why just this circle of creatures completes the world. Can I not by expectation affect the revolutions of nature, make a day to bring forth something new?

Observe all kinds of coincidences, as to what kinds of birds come with what flowers.

The last question in this passage is reinforced by another passage in *Autumnal Tints*, which was published five months after his death in 1862:

All this you surely will see, and much more, if you are prepared to see it,--if you look for it. Otherwise, regular and universal as this phenomenon is, whether you stand on the hill-top or in the hollow, you will think for threescore years and ten that all the wood is, at this season, sere and brown. Objects are concealed from our view, not so much because they are out of the course of our visual ray as because we do not bring our minds and eyes to bear on them; for there is no power to see in the eye itself, any more than in any other jelly. We do not realize how far and widely, or how near and narrowly, we are to look. The greater part of the phenomena of Nature are for this reason concealed from us all our lives. The gardener sees only the gardener's garden. Here, too, as in political economy, the supply answers to the demand. Nature

does not cast pearls before swine. There is just as much beauty visible to us in the landscape as we are prepared to appreciate,--not a grain more.(57-8)

What Thoreau says in this passage reminds me of David Hume's theory called "theory infected theory", which argues that our observation is affected by the theories we hold. Thoreau is well acquainted with Samuel Taylor Coleridge (1772-1834), who is on the lineage of David Hume (1711-1766) and Immanuel Kant (1724-1804). Hume's argument boils down to what we mean by the expression, "What we expect is determined by our past experience and our present percepts." The common expression, "when a student is ready, the teacher will come," goes along with what Thoreau considers the Great Teacher.

Every incident is indeed a sign that reveals the truth of universe, and in this sense Thoreau shares the view with Japanese Shingon esoterism and modern Peircean semiotics. The *Saijiki* is in fact a collection of semiotic signs that correspond to the life cycle of the universe. The seasonal phenomena and our life are thus unavoidably and mysteriously connected to each other. The *Saijiki* creates order out of the complex seasonal phenomena, while keeping us in touch with the cosmic life force.

The "circle of creatures" Thoreau mentions immediately reminded me of the 72 Spells. Each of the 72 spells has about 5 days, and is represented by a typical seasonal phenomenon commonly observed during the period. I think this is exactly what Thoreau means by the "circle of creatures." The same kind of mind existed two thousand years apart on the opposite sides of this planet. They have dealt with the original relationships with the universe. Survival in nature two thousand years ago must have been more challenging than now. This 72-spell system, along with the 24-period system, was a necessary survival tool for those ancient people who only had primitive production technology.

The Japanese adopted the 72-spell system from China, and have modified it according to the Japanese climate. During the Edo period, Ranzan Takayama came up with his version of the 72 Spells, which roughly resembles the present-day animal-plant calendar in the Osaka area. Recently Sakuhei Fujiwara has proposed "A New 72 Spells of Tokyo," which is based on reports from the Central Meteorological Bureau. In addition, we have "72 Spells of Sapporo" and "72 Spells of Fukuoka." We could perhaps easily produce a "72 Spells of Concord" out of Thoreau's *Journal*.

A practical reason for the apparent gap between the two concepts of spring in the

24SP and Thoreau's Journal is, as I mentioned earlier, geographical; the 24SP is based on the climate in Tokyo, while Concord is located as far north as Sapporo in Japan. As a matter of fact, the haiku poets in Sapporo have come up with their own version of the book of season-words. The *Book of Season-Words of Sapporo* has its own unique divisions for the four seasons as follows.

Spring: Spring Equinox — Increasing Heat

Summer: Grain Planting — Intense Heat

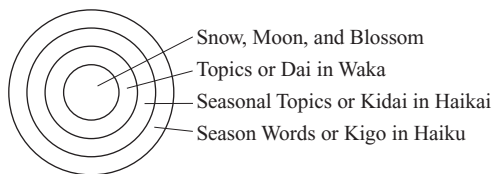
Autumn: Coming of Autumn — Cold Dew

Winter: First Frost — Out of Hibernation

This shows that Thoreau and the haiku poets in Sapporo shared a similar concept of spring.

In a Japanese *Saijiki*, season-words are usually classified into several categories, including Astronomy, Weather, Geography, Plant, Animal, Human Affairs, and Religion. This classification system corresponds to the flow of the solar energy. Our Earth is a small island floating in the photonic current of the solar energy. Season-words are specific signs reflecting the cycle of the Earth-Life, and they are an ode to the joy of our cosmic life.

A *Saijiki* reflects a manner of relationship between people and things in the world. A theory developed by Kenkichi Yamamoto explains how season-words have developed in Japan. He proposes a tree-ring model to show the stages of aesthetic development. This theory is the basis of many of the *Saijiki* he has produced and have been widely recognized.



Snow, Moon, and Blossom in the core of the rings represent the three essential aesthetic elements. The outer ring is the bridgehead for reaching out into the chaotic seasonal phenomena in the real world. The moon is the time keeper, the snow represents one of the three modes of water, and the blossom symbolizes the joyful beginning of the life cycle of the plant kingdom. Snow represents the aesthetic of chill and pregnant endurance, the moon teaches lovers the meaning of joy, sadness, and longing, and the



blossom shows us the lustrous enchantment of life. Season-words are the indeces, in their semiotic sense, standing for the objects in the world, and point to things which hold the primordial power of our language. A *Saijiki* is a storage of Beings, in its Heideggerian sense. By the same token, a *Saijiki* is a mandala in the sense of Shingon. When writing renku we are expected to project a comprehensive worldview, so it is only natural to develop a classifying system like a mandala.

The season-words reflect a century-long accumulation of our common wisdom, which may not always be scientific but is full of practical sense. Thoreau declares that he loves the unscientific man's knowledge about bee-hunting, because there is so much more humanity in it, and because it is connected with true sports. I would like to say that season words are one of the elements that make haiku or renku a creative sport, both physically and mentally. Basho walked 2500 kilometers in his famous journey called *Narrow Road to the North*, or *Oku no Hosomichi*, exploring new seasonal topics. He said if you discover one new season-word in your life, you are a lucky poet. I think America is a gold mine of new season-words.

The aesthetic trend of Thoreau's *Journal* resembles that of Shinkei, a renku poet in the 15<sup>th</sup> Century, who said that ice is the most enchanting thing, and introduced the aesthetic of chill into the medieval renku tradition. This is one of the similarities between Shinkei and Thoreau who both left volumes of delicate descriptions of snow and ice. Thoreau says on March 30, 1852, for example, "Though the frost is nearly out of the ground, the winter has not broken up in me. It is a backward season with me. Perhaps we grow older and older till we no longer sympathize with the revolution of the seasons, and our winters never break up." This is the essence of the aesthetic of chill, and a careful study of Shinkei and Thoreau would find more similarities between them. Shinkei and Thoreau both lived an ascetic lifestyle that is also found in the lineage of Saigyō and Bashō.

#### 4. Conclusion

I have come to realize that the 72 Spells will adequately serve for the purpose of classifying the seasonal phenomena found in Thoreau's *Journal*. The *Journal* is a series of ongoing comments on the everlasting and ever-changing seasonal phenomena, which means that the *Journal* reflects an experiential or human-centered seasonal view. The 24SP together with the Yin-Yang philosophy, on the other hand, is a well-formed

seasonal system, reflecting an Earth-centered seasonal view.

The topic of this paper can be developed into a more comprehensive project, which I would like to call the Walden Almanac. It can be created if four necessary conditions are met. First, we will need a Thoreau Corpus, which is a database of all the content of Thoreau's *Journal*. Second, we need a KWIC Concordance to the Thoreau Corpus. KWIC is an acronym of Key Word In Context, which will enable us to systematically retrieve all the target words in the *Journal*. The third element is creating a database with a technical assistant. And the last and indispensable thing we will need is time and financial assistance.

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### Appendix 1: The 24 Seasonal Periods

節名 Period	Date	Celestial Longitude	Temp (Tokyo)		Classical Seasons	Modern Seasons
			Av	Lo-Hi		
立春 Coming of Spring	2/04	315	04	00-09	Spring	
雨水 Rain Water	2/19	330		01-10		
啓蟄 Out of Hibernation	3/05	345	07	02-12		
春分 Spring Equinox	3/20	0		04-14		Spring
清明 Serene & Bright	4/04	15	13	08-17		
穀雨 Grain Rain	4/20	30		10-19		
立夏 Coming of Summer	5/05	45	17	13-22	Summer	
小満 Increasing Heat	5/21	60		14-23		
芒種 Grain Planting	6/05	75	21	17-24		
夏至 Summer Solstice	6/21	90		19-26		Summer
小暑 Slight Heat	7/07	105	25	21-28		
大暑 Intense Heat	7/22	120		24-31		
立秋 Coming of Fall	8/07	135	26	24-31	Fall	
処暑 Sporadic Heat	8/23	150		23-30		
白露 White Dew	9/07	165	23	22-28		
秋分 Autumn Equinox	9/23	180		18-26		Fall
寒露 Cold Dew	10/08	195	17	15-22		
霜降 First Frost	10/23	210		12-20		
立冬 Coming of Winter	11/07	225	11	10-19	Winter	
小雪 Light Snow	11/22	240		07-15		
大雪 Heavy Snow	12/07	255	06	03-13		
冬至 Winter Solstice	12/21	270		02-11		Winter
小寒 Moderate Cold	1/05	285	03	00-09		
大寒 Severe Cold	1/20	300		- 1-09		

Note: Temperatures in Tokyo show the monthly average on the left and the lowest-highest in each period on the right. I have lost the data source, but it is enough to get the basic idea of temperature changes. The dates, as they were in 1996, show the beginning of each seasonal period, and they vary every year by one to three days.

### Appendix 2:

#### The Japanese 72 Spells (Horeki-Kansei, 18<sup>th</sup> Century), combined with the 24SP

<u>節名 24 Periods</u>	<u>Celestial Longitude</u>	<u>Japanese 72 Spells</u>	<u>Date</u>
立春 Coming of Spring	315	East Wind Melts Ice	2/ 4-- 8
	320	Warbler Sings	2/ 9--13
	325	Fish Come up to Ice	2/14--18
雨水 Rain Water	330	Earth Vein Moistens	2/19--23
	335	First Mist	2/24--28
	340	Budding Starts	3/ 1-- 5
啓蟄 Out of Hibernation	345	Bugs End Hibernation	3/ 6--10
	350	First Peach Blossoms	3/11--15
	355	Caterpillars to Butterflies	3/16--20
春分 Spring Equinox	0	First Sparrow Nests	3/21--25
	5	First Cherry Blossoms	3/26--30
	10	First Thunder	3/31--4/4
清明 Serene & Bright	15	Swallows Arrive	4/ 5-- 9
	20	Geese Head North	4/10--14
	25	First Rainbow	4/15--19
穀雨 Grain Rain	30	Reed Horn Shoots	4/20--24
	35	Last Frost; Seedlings Out	4/25--29
	40	First Peony Flowers	4/30--5/4
立夏 Coming of Summer	45	First Cry of Toad	5/ 6--10
	50	Worms Come Out	5/11--15
	55	First Bamboo Shoots	5/16--20
小満 Increasing Heat	60	Silkworms at Mulberry Leaves	5/22--26
	65	Benibana (Carthami Flos)	5/27--31
	70	Autumn of Barley	6/ 1-- 5

芒種 Grain Planting	75	Pra Yin Mantis Hatches	6/ 6--10
	80	Decayed Grass to Fireflies	6/11--15
	85	Plums Turn Yellow	6/16--20
夏至 Summer Solstice	90	Dry Brown Grass	6/21--26
	95	Iris Flowers	6/27--7/1
	100	Hangesho Grows	7/ 2-- 6
小暑 Slight Heat	105	Hot Wind	7/ 8--12
	110	Lotus Flowers	7/13--17
	115	Hawks Learn How to Fly	7/18--22
大暑 Intense Heat	120	Paulownia Flowers	7/24--28
	125	Earth Wet and Humid	7/29--8/2
	130	Occasional Heavy Rains	8/ 3-- 7
立秋 Coming of Fall	135	Cool Breeze	8/ 8--12
	140	Tsukutsukuboshi Cicada Cry	8/13--17
	145	Fog Rises and Falls	8/18--22
処暑 Sporadic Heat	150	Cotton Flowers	8/24--28
	155	Heaven and Earth Calm Down	8/29--9/2
	160	Rice Grains Ripen	9/ 3-- 7
白露 White Dew	165	Dewy Grass White	9/ 8--12
	170	Wagtails Twitter	9/13--17
	175	Swallows Leave	9/18--22
秋分 Autumn Equinox	180	Thunder Utters No More Sound	9/23--27
	185	Bugs Get to Hibernation	9/28--10/2
	190	Streams Get Dry	10/ 3-- 7
寒露 Cold Dew	195	Geese Arrive	10/ 8--12
	200	Chrysanthemums Bloom	10/13--17
	205	Crickets Come to Door	10/18--22
霜降 First Frost	210	First Frost	10/23--27
	215	Occasional Drizzle	10/28--11/1
	220	Maples and Ivies in Yellow	11/ 2-- 6
立冬 Coming of Winter	225	Camellia Blooms	11/ 7--11
	230	First Frozen Ground	11/12--16
	235	Narcissus Fragrant	11/17--21

小雪 Light Snow	240	Rainbows Hide Away	11/22--26
	245	North Wind Blows Leaves	11/27--12/1
	250	Wild Orange in Yellow	12/ 2-- 6
大雪 Heavy Snow	255	Get to Winter Seclusion	12/ 7--11
	260	Bears Hibernate	12/12--16
	265	Salmon Gather	12/17--21
冬至 Winter Solstice	270	Selfheal Grows	12/22--26
	275	Dear Antlers Fall	12/27--31
	280	Wheat Sprouts Under Snow	1/ 1-- 5
小寒 Moderate Cold	285	Parsley Grows	1/ 6--10
	290	Waters and Springs Move	1/11--15
	295	First Call of Pheasant	1/16--20
大寒 Severe Cold	300	Silver Leaf Flowers	1/21--25
	305	Ponds with Thick Hard Ice	1/26--30
	310	Chickens Brood	1/31--2/4

[End of Japanese 72 Spells]

### Appendix 3: Celtic Calendar

*A Celtic Book of Days*, Sarah Costley and Charles Kightly, New York City: Thames and Hudson, 1998

<u>Month</u>	<u>Celtic Concept</u>	<u>Celtic Names</u>	<u>Annual Cycle</u>
Jan	Cold Air Month		
Feb	Whirling Month	First Month of Spring (Scottish)	[Feb. 1] dark half
Mar	Busy Month	Seed Time (Scottish)	
Apr	Primrose Month		
May	Beltane Daily Month	First Day of Summer (Welsh)	[May 1] light half begins
Jun	Month of Midsummer	Midsummer (Welsh)	

Jul	Month of Hunger	End of Summer (Manx)	
Aug	Harvest Month		[Aug. 1]
Sept	Mid-Autumn		
Oct	Watery Month	End of Autumn (Irish)	
Nov	Summer' s End	Winter Calends [Nov. 1]	[Nov 1] Year Begins darkness begins
Dec	Mo of Black Storms	Midwinter (Scottish)	

#### Appendix 4: Egyptian Calendar

Calendar Year: 365 days; 12 months plus “five surplus days of the year.”

Three Seasons: 12 months were divided into three seasons consisting each of 120 days, which were named after the three chief periods of Egyptian agriculture, the Inundation, the Growing of the seed, and the Harvest. The beginning of the time of the Inundation was about the 20<sup>th</sup> of July, which was considered to be the Egyptian New Year's Day.

<Three Seasons>

Inundation	07/20 – 11/19
Growing Seed	11/20 – 03/19
Harvest	03/20 – 07/19

Sothic Year: Natural year of the Egyptians. The peasants and the priests, on account of agriculture and of certain festivals, cared for the Year of Nature; they maintained the old tradition that the day to be regarded as the beginning of the year, and of the inundation, was that on which Sothis (Sirius) first reappeared in the morning sky.

Sothic Period: A cycle of 1460 years. When one calendar year is 365 days, it is still 1/4 of a day too short. The Egyptians did not correct this difference. Consequently, the beginning of the Sothic Year and the Calendar Year fall apart by one day every four years, and It takes 1460 years for them to match again.

(Erman, Adolf, 1971. *Life in Ancient Egypt*, tr by Tirard. New York: Dover. 351)

### **Appendix 5: a Berkshire Gardening Calendar**

Berkshire Gardens, including Berkshire Botanical Garden and Chesterwood Garden, Stockbridge, MA

Eight Seasons of the Gardening Year:

1) 4/6 Pre-Spring

Ground is still frozen. Thin ice in the pool. Tulips and daffodils shoot. When soil sticks together in the folded hand, it is the clean up season. Branches are trimmed. Forsythia in bloom.

2) 5/10 Early Spring

Frogs in the pond. Magnolias and daffodils in bloom.

3) 5/28 Spring

Lilac blossoms. Walt Whitman's poem says... Ferns (Shuttle cock fern and Maiden Hair fern). The Mount is a mansion of a lady, with a beautiful garden.

4) 6/21 Early Summer

Rhododendrons and Water lilies are in bloom. Twilight is the golden hour. Summer afternoon is the time for garden parties (Henry James). Colonial garden with a stream in the middle of a path.

5) 7/25 Midsummer

Summer grass is chest high. Kids play soccer in the meadow. The property of H. H. Cook, Stockbridge. Wheatleigh,

6) 8/19 Late Summer

Zinnia in bloom. Harvest of tomato and cucumber. Trimming of hedge.

(song) In sunny calm of noon... Herb garden. Rosemary. Chesterwood garden.

7) 9/11 Early Fall

On the bike. Indian summer.

8) 10/12 Fall

Autumnal tints. Harvest Festival at Berkshire Botanical Garden. Sheep farm.