

Daylight Saving Time vs. Winter time viewed from the perspective of Chinese medicine –

A discussion of health and well-being in relation to time.

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*A successful treatment should be like conducting a piece of beautiful music.**

* (Wang, Fu-Y. Robertson, J.D. (2008). Applied Channel Theory in Chinese Medicine. Seattle: Eastland Press.)

Summary

The current discussion in the Dutch government about the choice between summer time or winter time as a constant clock time is the reason for this literature study. This paper examines the ideal clock time for human health and well-being. The basis for this is based on the theory of Stems and Branch acupuncture. This has been supplemented with various sources related to Chinese medicine, history, politics, Western medicine and psychology to test and confirm the data found. The clock is a cultural symbol, which should be a reflection of a natural phenomenon, in the case of the clock it is solar time. In the Stems and Branches acupuncture we find the aspect of time in the 12 Earthly Branches. The 12 Earthly Branches are connected with the flow of ying-qi and are related to our nutrition. Emotional life is also influenced by the 12 Earthly Branches. In the Tribes and Branches acupuncture solar time is the basis for the different rhythms that are described. Solar time seems to best support human bio-rhythms, and is said to be the most ideal clock time. In the Netherlands, winter time is closest to the local solar time. Hence, on the basis of the data from this study in the Netherlands, winter time is most suitable as a constant clock time, in the discussion of summer time versus winter time.

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Literature

1. Preface: solar time as clock time

During the classes about the organ clock, it was unclear whether summer time or winter time should be assumed. Every year I experience problems with the transitions of the seasons. And this discussion has raised the question in my mind what the influence of summer time and winter time is on human functioning. Does it matter how we set our clock? In the acupuncture literature I have searched for information on how best to set my clock to achieve optimal functioning. This led me to the Stems and Branches acupuncture, where solar time is taken as the basic starting point for all rhythms. This is the time determined by the position of the sun in the sky. So I set the clock a year ago. First to winter time, then to solar time and I left it on that. The transitions of the seasons were no longer a problem. A certain tension left my body, which was beneficial to my digestion. And what was very striking was that throughout the spring and summer season I had much more energy than normal and felt significantly more comfortable.. This prompted a deeper study of Stems and Branches acupuncture, and the influence of time and rhythm on human life.

2. Problem definition: summer time versus winter time

a) *Current situation:*

Daylight saving time and winter time have been used for years to save energy. However, there are signs that this can disrupt the natural rhythms of humans. Thus it would be better to make a choice between the two.

b) *Desired situation:*

There is a permanent clock time which best suits the natural rhythms of man.

c) *What to know about this:*

Considering the Stems and Branches acupuncture, which of the two times would best suit the natural rhythm of man?

Three hypotheses for the outcome of this study are:

- i. There is a clear preference for either rhythm such as clock time
- ii. It does not matter which of the two rhythms is selected as the clock time
- iii. It is still unclear which of the two times can best be chosen because insufficient insight has been obtained by means of the theory of Stems and Branches acupuncture.

3. Method: literature study

First of all, the most important components with regard to time and rhythm from the Stems and Branches acupuncture were mapped. Golding (2013) was taken as the basis for this. This source has been supplemented with information obtained from Kervel (2017). In order to test and validate the finding from the Stems and Branches theory with regard to determining the ideal clock time, additional information has been sought in both literature related to Chinese medicine, as well as literature related to history, politics, Western medicine and psychology.

Not all information regarding Stems and Branches acupuncture can be found in the classical sources. This is because part of it has only been passed on orally. In contemporary literature on Stems and Branches acupuncture some of this data has now been put in writing.

4. Introduction: national clock-time discussion

At the moment there is a discussion going on in Dutch politics about switching to a fixed clock time. There, too, it has become clear that it is not ideal for humans to change the clock twice a year. Thus, there is a plan to abolish summer time and winter time. But the question is, what time do we put on the clock? Are we assuming summer time or winter time? There is something to be said for both.

In order to make a well-considered choice, it is important to properly research which time will benefit our health and well-being the most.

This paper investigates which time is the ideal clock time from the Stems and Branches acupuncture.

This analysis looks like this:

The basic assignment for this paper is to write an elaboration of the

1. Stems and Branches acupuncture. Because it is not possible within the limited scope of this paper to discuss the entire Stems and Branches acupuncture, it has been decided to zoom in on one aspect of the Stems and Branches acupuncture: time.

The aspect of time is viewed in the context of the current discussion in the government about the choice between summer time and winter time. In the first paragraph an **introduction to Stems and Branches acupuncture** is given. The intention is to allow the reader to place the aspect of time within the theoretical framework of the Stems and Branches acupuncture.

2. Next, we will **zoom in on the aspect time** in the Stems and Branches acupuncture. Time and movement are inextricably linked. But what is time? How are time and movement linked?
3. Then follows a discussion of **the flow of ying qi (Nourishing Qi) and the flow of wei qi (Protective Qi)**. These are two different rhythms in humans, each of which has its own scope in the human body. Is either of these more or less related to clock time, or doesn't it matter?
4. **A clock is a symbol**, and a symbol works unconsciously. This data will be explored and integrated into the above aspects.
5. And finally, there is still another option that is nominated as clock time: **the solar time**.

At the end of this paper, the above information is put together in order to arrive at a recommendation on the clock time to choose.

5. Stems and Branches acupuncture: a brief introduction

This paper is an investigation into the aspect of time, in relation to clock time, within the framework of Stems and Branches acupuncture. To place the aspect of time within the theoretical framework of Stems and Branches acupuncture, here is a brief introduction to Stems and Branches acupuncture.

The Stems and Branches acupuncture provides a mathematical model for the clinical application of the three basic theories to classify *qi*. The basis for this is found in the *Huang Di Nei Jing*. In classical sources, the classification of *qi* is described in the following three ways:

1. The classification *yin* and *yang*, which also includes *de liu qi* (Six Qi).
2. The classification according to the *wu xing* (Five Elements).
3. The three-way divisions into Heaven (creation), Man (hinge of state between Heaven and Earth) and Earth (the created).

The elements from these three basic theories are configured in the Stems and Branches acupuncture in three ways into a mathematical model. This creates three mathematical models, each of which describes a specific area of life. The three mathematical models are the following:

1. **The Heavenly Stems** – these describe the **aspect space**. They represent the blueprint of energies in man. They are used in the treatment of (and provide an indication for) specific strengths and weaknesses with regard to heredity, congenital and familial disorders.
2. **The Twelve Terrestrial Branches** - these describe **aspect time**. They form a hinge between Heaven (creation) and man. The twelve Earthly Branches are represented by the twelve major meridians, the twelve hours of the organ clock, the twelve months of the year, and the flow of the *ying qi*. They are used to treat emotional, social and psychological conditions.
3. **The *liu qi* (Six Qi)** –this describes the **interaction between Heaven and Earth**. The *liu qi* each give a specific quality to the physical structures of the body. They supplement the ancestral influences. They, as it were, put the finishing touches to the client's constitutional condition. They give an indication of the physical condition of the client and can be used to treat this.

These rhythms are placed in a specific way in certain calendars. From this, the models can be read and calculated for the clinical application. The date, time and place of birth as well as the current date, time and place are used. Combined, the Stems and Branches follow a sixty-year cycle. This is used to count the hours, days, months and years. The twelve Earthly Branches are the element within the Stems and Branches acupuncture that describe the aspect of time. This will be zoomed in on in this paper.

6. Time in the Stems and Branches acupuncture

6.1 The taiji symbol: the inseparable connection between time and movement

First of all, it is important to zoom in on the aspect of time itself. What is time and how does time arise? By understanding this, it can be understood why the aspect of time affects our health and well-being.

Within the Stems and Branches acupuncture it is the 12 Earthly Branches that are related to the concept of time. The aspect of time is further explained with the help of the *taiji*-symbol (drawn by Chen Tuan in the thirteenth century, see front page).

The *taiji*-symbol is made up of three stages:

1. First of all, it is the **wuji**. The *wuji* is described as that of everything depends, or the vital principle. It is the root of yin and yang. This is the void space symbolized by an empty circle. This represents the undifferentiated whole and represents the **aspect space**.
2. At the moment when movement enters this space, time travels through space. **Time is movement**. This is shown by the wavy line in the center of the *taiji*-symbol. Space and time are inextricably linked. Where there is space, the aspect of time follows. This is always done in this order. The moment time passes through empty space, a **differentiation arises in yin and yang**. *Yin* and *yang* are two complementary forces, balancing each other and shaping existence (these are represented by the black and white colors in the *taiji*-symbol).
3. **Qi** is de vrucht van de **interactie tussen yin en yang**. *Qi* is de kracht van waaruit het hele universum wordt gevormd. *Qi* representeert ook wel de bloeiperiode van het leven. Zodra er geen interactie meer is tussen *yin* en *yang*, is er verval, welke eindigt in de dood.

From the analysis of the *taiji*-symbol one can therefore deduce that time is inextricably linked with movement. Where there is movement, there is *yin* and *yang*. And where there is an interaction between *yin* and *yang*, there is *qi*. *Qi* is the basis of everything in the universe. From the most massive substance to our finest thoughts. Movement and time are seen to be an essential aspect of our existence. Without time, no life on earth is possible. It starts with the egg (empty space), which is fertilized by the sperm (the movement that goes through space). Once there is no more movement, there is decay and old age, and existence can no longer be sustained.

6.2 The twelve Earthly Branches and the flow of ying qi (Nourishing Qi): a close relationship with time.

Time is movement. But what moves in the body and what movement in the body is provided by the 12 Earthly Branches? Here we come to the flow of *ying qi*. This flow follows the organ clock as described further below.

The flow of *ying qi* circulates 50 times through the meridians in 24 hours. That's 28.8 minutes per cycle. This means that every double hour the *ying qi* flows four times through the meridians. A specific Branch peaks every double hour. This can be compared to a large wave that passes through the entire meridian system in 24 hours. It concerns a constant flow in which no variations occur. The organ clock (or rather, meridian clock) shows exactly which meridian has its maximum activity at a certain time of the day. In contrast, the same meridian has its weakest activity 12 hours later.

The function of *ying qi* is to nourish the body. It is inseparable from *xue* (Blood), and flows along with *xue* through the *jing luo* (meridians) and *xue mai* (blood vessels).

Below is a diagram showing the most important aspects regarding the Earthly Branches.

	1	2	3	4	5	6	7	8	9	10	11	12
Name of Branche	zi	chou	yin	mao	chen	si	wu	wei	shen	you	xu	hai
Meridian	GB	LIV	LU	L.I.	ST	SP	HT	SI	BL	KiD	P	SJ
Time	23-1	1-3	3-5	5-7	7-9	9- 11	11- 13	13- 15	15- 17	17- 19	19- 21	21-23

Month	11	12	1	2	3	4	5	6	7	8	9	10
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Table 1. Aspects of the Earthly Branches.

By knowing the flow of ying qi through the meridian system, where every two hours a certain Branch reaches its maximum activity, it can be understood that these are the times when these meridians are best able to perform their task. On the other hand, the same meridian is the least active 12 hours later and has minimal capacity to perform its task. This has implications for what times are best suited for certain activities. The effectiveness of (conventional) medication is also influenced by the organ clock.

7. Ying qi and nutrition: a clear relationship between time and nutrition

“Mommy, what time is it, are we going to eat already?”

Perhaps this is the most frequently asked question regarding time. Is it a coincidence that people are asked whether it is already time to eat when we feel hungry, or is there a correlation between diet and time?

The foregoing has shown that ying qi has a close relationship with the aspect of time. If we look at the origin of ying qi, we come directly to our diet. The formation of qi in our body looks like this:

1. De *wei* (Stomach) en *pi* (Spleen) extract *gu qi* (Grain Qi) from the nutritional drink that we take.
2. With the help of *kong qi* (Air Qi) under the influence of *fei* (Lungs) and *xin* (Heart) in the chest, this is transformed into *zong qi* (Qi of the Bortskas) and *zhen qi* (True Qi). *Yuan qi* (Original Qi) is the catalyst for the transformation of *zong qi* into *zhen qi*.
3. Finally, the *zhen qi* manifests itself in a yin and in a yang aspect: *ying qi* and *wei qi* (Protective Qi).

So there is a clear relationship between time and nutrition through *ying qi*, both in origin and in function (nourishing the body) of the *ying-qi*.

8. Ying qi versus wei qi: nutrition versus protection

In addition to the cycle of *ying qi*, a second cycle has thus come to light: the cycle of *wei qi*. Does this current have a clear relationship with clock time? We can already deduce from the name that it has a different function than the *ying qi*. While *ying qi* has a nourishing function for the whole body, *wei qi* has the function of protecting the external part of the body.

What does **the wei qi cycle** look like? The *wei qi* cycle is characterized by the *yin* and *yang* aspect into which it is divided. During the day, *wei qi* flows into the external, or *yang*, part of the body. Here it protects the body from external invasions. At night, *wei qi* goes to the internal, or *yin*, aspect of the body. Here it cleans the *zang* (*yin* organs) from both the physical and the non-physical pollution. In total, *wei qi* circulates through the body 50 times per day, 25 times through the external and 25 times in the internal. However, if we link the aspect of time to this, we see that this flow is not directly related

to clock time, but seems to be connected to our lifestyle. The cycle begins in the morning when we wake up and **open our eyes**. At that point, the flow of *wei qi* begins in the external part of the body. In the evening when we go to sleep and **close our eyes**, the flow of *wei qi* goes inwards, describing its cycle through the *zang* organs.

The flow of *wei qi* has a connection with our pattern of waking and sleeping, but may be limited by time. The peak of the *yang* in the body is at noon. The peak of the *yin* in the body is at midnight. This could explain the phenomenon that if we wake up late, we can feel tired or faint all day long. The *yang* may then no longer be able to develop its full potential because the flow of *ying qi* and *wei qi* are no longer in harmony with each other.

Chapter 2 of the *Huang Di Nei Jing - Su Wen* contains specific directions for the ideal rhythm for getting up and going to sleep. The correct rhythm for getting up and going to sleep is given per season. This looks like this:

	Getting up	Go to sleep
Spring	Early	Early
Summer	Early	A bit later
Autumn	Sunrise	Dawn
Winter	Sunrise (which is later in winter)	Early

Table 2. Correct rhythm with regards to sleeping and getting up.

From this table it can be seen that it is desirable to get up significantly later in winter. This resonates with the current shift in clock time, where we get up later in winter and get up earlier in summer relative to solar time. However, a different rhythm applies to going to sleep. It is the summer season that people can go to sleep significantly later. This is a rhythm that is at odds with the current shift of the clock. Thus, the *wei qi* rhythm **does not show full resonance with our clock time** or the current adjustment of clock time to the summer and winter season. This is a rhythm that seems to appeal more to discipline than adaptation to a clock time.

9. Symbolism, the unconscious and the power of the clock

Up to now it has become clear that a clear rhythm in relation to time can be found in the human body. It concerns the flow of *ying-qi* and is represented by organ clock in Chinese medicine. Is it enough if we adjust our activities to this, or does it really matter how we set the clock?

What is the power that the clock symbol has on our lives? What are symbols, and how do symbols affect people? Can a relationship be found between symbols on the one hand and human health and well-being on the other?

The clock is a **cultural symbol**. This is a symbol used to express eternal truths. The clock is one of the universal sounds of humanity. In earlier times the clock was mainly used as a practical means of communication. Here was the one who owned the clock, the one who held power over the population. By giving certain signals by ringing the bell, the population knew what had to be done. The advent of the hour clock was accompanied by

a change in attitude to time. Time was handled in a rational way. This change of mentality was especially noticeable in the economic field: time became profitable, time became money. This is a development that is still relevant today. Everyone recognizes how the ticking of the second-hand can get on your nerves. The ticking of the clock determines our actions and thoughts. We forget to feel what is really good for us. What the signals are that our body gives us. Everyone recognizes the time pressure of a deadline, the deadly time of waiting. Power and money seem to be inseparable from time.

So the ticking of the clock has a major impact on our lives. But what about the symbol of the clock? That goes beyond just the ticking of the clock. What does a symbol mean and how does that affect people?

Symbols act directly on the unconscious part of the brain, or the limbic system. This part of the brain is also called the emotional, or affective, brain. The hypothalamus is part of the limbic system and functions as the integration center of the autonomic nervous system. One of its functions is to regulate biological rhythms.

The limbic system interacts with the higher cerebral cortical regions. Because of this, there is a close relationship between our feelings (through the emotional brain) and our thoughts (through the cognitive brain). This connection makes it possible for emotional events to engulf us. But on the other hand, logic can also measure and control our emotions.

According to Jung, symbols are highly charged with psychic powers and can evoke profound emotional reactions. They are an essential part of our psyche and are the vital forces needed in building human society.

Where the Middle Ages were still dominated by symbols and the language of symbols, today we live in a society of science and analysis. Everything should be rationally understood and explained. If that fails, the subject in question quickly disappears into the corner of superstition and fantasy. But aren't superstition and fantasy just a product of misunderstood and suppressed symbolic language? The moment symbols (which are essential life forces) are repressed or neglected, they disappear to the subconscious where they start to lead a life of their own. This with all the incalculable consequences that entails. When researching primitive communities whose spiritual values were exposed to the influences of modern society, the following effects were observed:

1. People-losing sense of life
2. The social organization falls apart
3. The people get into moral decay

This shows that the loss of spiritual values can pose a great danger to the functioning of society. It describes the condition we are in today. A society full of disorder and chaos. This seems to be the price we have to pay for over-rationalization: a world full of disorientation and dissociation. Clock time today is determined by practical, rational applicability; but has thereby lost its real power.

If we look at the relationship between the symbol the clock and the theory of Stems and Branches acupuncture from this perspective, we see clear parallels with the 12 Earthly Branches:

1. The clock is a symbol and acts as such on the limbic system. The limbic system is involved in our **emotions**. In the 12 Earthly Branches we find this in the fact that the 12 Earthly Branches are used in the treatment of social and emotional aspects of life.
2. The hypothalamus functions as an integration center of the autonomic nerve system and regulates biological rhythms. In the 12 Earthly branches we find these two aspects combined in the organ clock. Here **the functioning of the organs** (which is related to autonomic processes) is related to time.

10. Third player in the field: solar time

To set the clock time to the correct time, and to determine which clock time is most beneficial for human health and well-being, the question arises: what is the right time? **Solar time is referred to as the true time** and is the time measured by the local position of the sun. Characteristic is that the sun always has its highest position at 12:00. The median solar time is used for the organ clock. The characteristic deviations from the true solar time are included in this so that a practically usable model with equal days is created.

Since the clock is a cultural symbol, as described in section 9, it should reflect an eternal truth. What is this eternal truth when it comes to time?

The eternal truth that can be found in the time division of the day is the reflection of the annual cycle. This is about the rising and falling of the *yin* and the *yang*. This looks like this:

- Midnight corresponds to midwinter (maximum *yin*)
- 6:00 am corresponds to the vernal equinox
- 12:00 pm corresponds to midsummer (maximum *yang*)
- 6:00 pm corresponds to the autumn equinox

The peak of *yin* is always found at midnight, and the peak of *yang* at 12:00 noon.

11. Conclusion: a challenge for the digital age

The Dutch saying for "there is no place like home" includes a reference to the ticking of the clock ("**zoals het klokje thuis tikt, tikt het nergens**")

The above shows that the clock is a cultural symbol that should be a representation of a natural phenomenon. This natural phenomenon is represented in the Stems and Branches acupuncture by the 12 Earthly Branches and the organ clock and is interpreted by solar time. Symbols appear to have a profound impact on human health and well-being. This concerns emotional life, the functioning of the organs, but also the social order. In addition, the *ying-qi* associated with the 12 Earthly Branches is responsible for nourishing our body. Both the formation and the distribution of *ying-qi* seem to benefit most from a good alignment of our lifestyle with the organ clock. The mean solar time would be the ideal clock time, and can be calibrated to the local true solar time during the equinoxes.

In itself this seems to be an unworkable model in everyday life. Making agreements at European and World level is very difficult. Those who attach importance to starting work and other activities part of the year earlier certainly have the right to speak up.

At the same time, today we live in a digital age, and it may be possible to enter a new era, with regard to time. This is based on the most favorable clock time for human health and well-being: solar time. With the current technical means it should be possible, for example, to program calendars and timetables in such a way that they are attuned to local clock times. With a well thought-out program, much more is probably possible than we think.

It can be practical and simpler to refine the division into time zones. Even today, there are already time zones that are not calibrated to whole hours. It would then switch to a new time zone every 15 minutes. As a result of this model that we have to give the 'Brabant quarter' (an alleged old-habit in the southern Netherlands province of Noord-Brabant, to arrive at an appointment 15minutes late) a new look. The local solar time can now be observed everywhere, but take into account the 'Brabant quarter' when you make an appointment! However, the digital age will have to offer us help here too, in order to arrive at a truly workable model.

It would be interesting to do further research on this. And to develop a practical model that benefits human health the most.

If we go back to the problem definition, we see that on the basis of this paper it can be concluded that hypothesis "i" is confirmed: based on the choice between summer time and winter time, the choice for winter time would be the most ideal for the Netherlands. However, for ideal health, it is not a matter of summer time or winter time, it is a matter of solar time.

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