Abstract— Theory of both Zangxiang (藏象) and Jingluo (经络) is useful in understanding economic disease. By using mathematical reasoning based on Yin Yang Wu Xing Theory in Traditional Chinese Economics (TCE), this paper demonstrates the treatment principle: “Searching for the primary cause of disease in treatment, treat both the root-cause and symptoms at the same time” (治病求本，标本兼治). It means that for the economic society, there is the mathematical structure of both Zangxiang and Jingluo as the second physiological system of steady multilateral systems. It can be used to determine both the root-cause and symptoms of the sick subsystem by using both Zangxiang and Jingluo. The first or second transfer law of economic society energies of both Zangxiang and Jingluo changes according to the different GBR (General Budget Revenue) inflation rate of economic society whether in the normal range or not. In general, for the GBR inflation rate, the normal range of theory is (8.95% - 20.07%) nearly to [9%, 20%], and the center is 13.705% nearly to 14%. Assume that the range of a GBR inflation rate is divided into four parts from small to large. Both second and third are for a healthy economy. The treating works are the treatment directly for a root-cause and the prevention indirectly for a more serious relation economic disease as symptoms. Both the root-cause and symptoms come from the first transfer law of economic society energies. And both first and fourth are for an unhealthy economy. The treating works are the treatment directly for a root-cause or the prevention indirectly for a more serious relation economic disease as symptoms. Both the root-cause and symptoms come from the second transfer law of economic society energies. Economic disease treatment should protect and maintain the balance of two incompatibility relations: the loving relationship and the killing relationship. As an application, the Chinese GBR inflation rate can be used for the metal subsystem how to do works based on to determine both the root-cause and symptoms of the sick subsystem of steady multilateral systems.

Index Terms— Traditional Chinese Economics (TCE), Yin Yang Wu Xing Theory, steady multilateral systems, incompatibility relations, side effects, medical and drug resistance problem

I. INTRODUCTION

Theory of both Zangxiang (藏象) and Jingluo (经络) is useful in understanding disease. Zangxiang and Jingluo are two general structures. The GBR (General Budget Revenue) of both Zangxiang and Jingluo is a general parameter linking together the complexity of relations between subsystem pairs of economic social system, economic social system itself, the capabilities for intervention reaction and self-protection of the economic social system as an economy and mind as a whole, related to the environment, food, health and personal history, air, water, earth, climate, season, etc. The GBR is as useful in understanding economic disease as the average is in statistics, or as the expected value is in probability calculation. GBR is useful in understanding economic disease. General budget revenue, a source of revenue, and planned and organized by the national budget and included in the budget management of funds. The general budget revenue is with the original “financial budget accounting system” in the corresponding concept of “budget”.

General public budget income refers to participate in social product allocation of national revenue, is to realize the functions of national financial guarantee. Mainly includes: (1) the tax: including domestic value added tax, excise, imports value-added tax and consumption tax, value-added tax and consumption tax, export tax rebate business tax, enterprise income tax, individual income tax, resource tax, urban maintenance and construction tax, property tax, stamp tax, urban land use tax, land value-added tax, car, ship's tonnages, vehicle purchase tax, duties, cultivated land usage tax, deed tax, tobacco taxes, etc. (2) the non-tax revenue, including special revenue, administrative fees, confiscated income and other income. The tax revenue according to the current financial system are divided into the central level and the local level.

Through the growth rate of price index to calculate the rate of inflation, prices can be respectively by the consumer price index (CPI), the producer price index (PPI), the retail price index (RPI), the gross domestic product (GDP), the gross national product (GNP) as conversion price index, and the general budget revenue (GBR), etc. In order to examine a country's power for public facilities (include the energy of science, education, etc.), general use of GBR, its formula is as follows:

\[ \text{GBR} = Q_n P^n_t r^n_1 + Q_2 P^n_2 r^n_2 + \ldots + Q_m P^n_m r^n_m, \]

where the type of digital and \( t, n \) is the number in the subscript, \( Q_n \) in (1) on behalf of the production of all kinds of the product, \( P^n \) in (1) on behalf of all kinds of the price of the product, and \( r^n_1 \) in (1) on behalf of all kinds of the tax rate of the product. Both the rate of GBR inflation and the GBR are two different concepts. Calculation method of the rate of GBR inflation through the calculation of the GBR changes:

\[ \text{current tax level - base tax level} \times 100\% = \text{base tax level}, \]

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where the tax rise level from low to high, to base the level of revenue for base. One of the base period is selected one tax level as a reference, so that you can put the other periods of tax level with a comparison between base level to measure the current level of inflation.

Note on the type, the rate of GBR inflation is not a tax index, which is not a tax rise, but the tax index to rise. The GBR inflation rate is the government measure of inflation one of the data. Popular speaking, the GBR is the tax of all goods and services on the market growth percentage. As an important indicator, observe the level of inflation in China, much attention has been paid to also for such an important indicator, as a new era of youth, more objective view should be observed. First of all, let the GBR be met. The GBR is to reflect the power and for public facilities (include the energy of science, education, etc.), related to all goods and services calculated tax, usually observed inflation as an important indicator.

Boskin [1] has found that there is the important relation between the GBR and the CPI. The GBR plays a key role in the CPI. So the central bank can minimize the inflation by taking certain predictive measures to keep the input prices under control. Because of the relation between the GBR and the CPI, the normal range of the GBR inflation rate can be obtained from the normal range of the CPI inflation rate. It is found that the normal range of the CPI inflation rate is from 2% to 5%. There are a lot of evidences (e.g., experimental identification for probability and real applications) to support this viewpoint, such as, Crane etc [2], Pauhofova etc [3], Funke etc [4], Formica etc [5], Fan etc [6], Adams [7], Hausman [8], Nahm [9], Mooza [10], Zhao [11], Daniel [12], Anonymous [13-14], and so on.

It is believed that the normal range of the GBR inflation rate is from 9% to 20%. It is because the GBR is more sensitive than the CPI at the low GBR inflation rate, so changes in the wider range at the low GBR inflation rate. Thus the retail business economic social system identifies an important indicator for an economic social system health: the value of GBR inflation rate, which, under normal conditions, ranges from 9% to 20%. Outside this range (low:Yin condition; high: Yang condition), economic disease appears. Almost always, when there is economic disease, the condition of inflation rate is a Yang condition, little is a Yin condition.

If the GBR rose is too large, it shows that the inflation has become the economic instability, the central bank will be a tight monetary policy and fiscal policy paying risk, resulting in the uncertain economic outlook. As a result, the index of high rise is often not welcome by the market. In the past 12 months, for example, the GBR rose 2.2%, that means, the cost of industry making rose by an average of 2.2% more than 12 months ago. When the cost of tax increase, your money value drops. That is to say, a 100-yuan notes, only can buy tax $97.70 worth of goods and services. Generally when the GBR inflation rate > 9%, it is called plus, is INFLATION. And when the GBR inflation rate > 20%, it is treated as a SERIOUS plus, is a SERIOUS INFLATION.

In this paper, the rate of inflation can be considered as the tax level rises rather than the currency quantity rises from the basic concept of GBR. It is because the GBR is the direct reflection of tax standards, although the tax level increase is difficult to be controlled directly.

The GBR is a general parameter linking together the complexity of relations between subsystem pairs of economic social system, economic social system itself, the capabilities for intervention reaction and self-protection of the economic social system as an economy and mind as a whole, related to the environment, food, health and personal history, air, water, earth, climate, season, etc. GBR is as useful in understanding economic disease as the average is in statistics, or as the expected value is in probability calculation.

The economic social system as an economy begins to activate the necessary mechanisms to restore this parameter to its appropriate range. If the economic social system as an economy is unable to restore optimal GBR levels, the economic disease may become chronic and lead to dire consequences.

Zhang etc [15-23] have started a great interest and admired works for Traditional Chinese Economics (TCE), where, through mathematical reasoning, they demonstrate the presence of incompatibility relations, which are predominant in daily life, yet absent in traditional Aristotelian Western logic.

Many people as Western persons are beyond all doubt the Yin Yang Wu Xing theory is superior to the traditional true-false logic, which does not contemplate incompatibility relations, which Zhang [19] has expertly explained from a mathematical standpoint.

The work Zhang [15,16] has started, allows many people like Western person to think of a true re-foundation of mathematical language, to make it a better suited tool for the needs of mankind economic social system and the environment. Although so doing, Zhang [18] also brings to light the difficulty of establishing the values of both the intervention reaction coefficients $\rho_1, \rho_2$ and the self-protection coefficient $\rho_3$ as parameters with due accuracy.

In this paper, the introduction of a parameter such as a GBR inflation rate will be suggested, in order to facilitate the understanding and the calculation of the values of both the intervention reaction coefficients $\rho_1, \rho_2$ and the self-protection coefficient $\rho_3$. This paper ventures to suggest this with all due to respect, because it is believed that the path Zhang [15,16] has started, in such an understandable way from the mathematical point of view, will be very useful for all mankind searching for tools to understand the mechanisms of economic social system.

The article proceeds as follows. Section 2 contains a parameter model and basic theorems, in order to explain both the intervention reaction coefficients $\rho_1, \rho_2$ and the self-protection coefficient $\rho_3$ through the introduction of a parameter model to study the normal range of a GBR inflation rate, while the first or second transfer law of economic society energies is demonstrated in Section 3, proved through the concept of both relation costs and a relationship analysis of steady multilateral systems. Furthermore, if the range of the GBR inflation rate is divided into four parts, for the economy in every part, the prevention or treatment method of economic diseases as the treatment principle of TCE is given in Section 4. As an application, the Chinese GBR inflation rate can be used for the metal($k_j$) subsystem how to do works based on to determine both the root-cause and symptoms of the sick.
subsystem of steady multilateral systems in Section 5 and conclusions are drawn in Section 6.

II. PARAMETER MODEL AND BASIC THEOREMS

The concepts and notations in Zhang et al. [21] are start and still used.

Let \( \varphi = (\sqrt{5} - 1)/2 = 0.61803399 \) be the gold number. Denoted \( \rho_0 = 0.5897545123 \) such that 
\[
\rho_1 = \rho_3 \text{ and } \rho_2 = \rho_1 \rho_3 \text{ and } 1 - \rho_1 \rho_3 = \rho_1 + \rho_2 \rho_3 \text{ if } \rho_1 = \rho_0', \rho_2 = \rho_0^2 \text{ and } \rho_3 = \rho_0, \text{ namely healthy number.}
\]
Assuming \( \rho_0' = 0.68232780 \), namely unhealthy number. It is because under a poor self-protection ability, the unhealthy number \( \rho_0' \) can make the poor healthy balance conditions hold:
\[
\rho_1 - \rho_3 = \rho_5 = \rho_0'/2 = 0.34116390,
\]
\[
\rho_2 - \rho_1 \rho_3 = \rho_6 = (\rho_0')^2 / 2 = 0.23278561
\]

if \( \rho_1 = \rho_0', \rho_2 = (\rho_0')^2 = 0.46557123 \) and \( \rho_3 = 1/2 \rho_0' \).

Thus \( \rho_0 < \varphi < \rho_0' \).

A parameter model of a GBR inflation rate in a mathematical sense based on Yin Yang Wu Xing Theory of TCE is re-introduced by using the functions \( \lambda(x) \) and \( \rho(x) \) of the GBR inflation rate \( x \) described as follows.

Let \( x \in (-0.1, 0.81) \) be a GBR inflation rate, where the values \(-0.1 \) and \( 0.81 \) are the minimum and maximum acceptable the GBR inflation rate. Denoted the value 0.13705 is the target as the expectation of the GBR inflation rate. Define a function \( \lambda(x) \) of the GBR inflation rate \( x \) in below:
\[
\lambda(x) = \frac{|x - 0.13705|}{(0.81 - x)(x + 0.1)}, \forall x \in (-0.1, 0.81)
\]

\[
\lambda(x) = \begin{cases} 
\frac{x - 0.13705}{0.81 - x}(x + 0.1), & 0.81 > x \geq 0.13705; \\
0.13705 - x, & -0.1 < x < 0.13705.
\end{cases}
\]

A parameter model is considered as 
\[
\rho(x) = \frac{1/2}{\lambda(x) + 1/2}, \forall x \in (-0.03, 0.65).
\]

Theorem 2.1 Under model (4), the following statements hold.

(1) The one that \( 0 < \rho(x) = \frac{1/2}{\lambda(x) + 1/2} - 1 \leq 1 \) is equivalent to the other that
\[
0 \leq \lambda(x) = \frac{1 - \rho(x)}{2 \rho(x)} < +\infty,
\]
where \( \lambda(x) \) is a monotone decreasing function of \( x \) if \( x \in (-0.1, 0.13705) \) or a monotone increasing function of \( x \) if \( x \in [0.13705, 0.81) \); and \( \rho(x) \) is a monotone decreasing function of \( \lambda(x) \) if \( \lambda(x) \in [0, +\infty) \); and \( \lambda(x) \) is a monotone decreasing function of \( \rho(x) \) if \( \rho(x) \in (0, 1] \).
(a). The absolute value \(|(\rho_1 + \rho_2 \rho_3) - (1 - \rho_2 \rho_3)|\) is nearly to 0 if \(0 < c < \frac{1 - \rho(x)^2}{2 \rho(x)^2} \leq \frac{1}{2}\) in which \(1 > \rho(x) \geq \rho_0'\).

(b). The value \([(\rho_1 + \rho_2 \rho_3) - (1 - \rho_2 \rho_3)]\) is included in the interval \([-\rho_0^2 = -0.20512, 0]\) if \(0 < c < \frac{1 - \rho(x)^2}{2 \rho(x)^2} \leq \frac{1}{2}\) in which \(\rho_1 \leq \rho(x) < \rho_0'\).

(c). The value \([(\rho_1 + \rho_2 \rho_3) - (1 - \rho_2 \rho_3)]\) is included in the interval \([-\rho_0^2 = -0.20512, 0]\) if \(0 < c < \frac{1 - \rho(x)^2}{2 \rho(x)^2} \leq \frac{1}{2}\) in which \(\rho_0 \leq \rho(x) < \rho_0'\).

Corollary 2.1 Under model (4), the following statements hold:

(1) For any \(0 < d < 1\) there is an unique solution \(u \in (-0.1, 0.13705)\) and there is also an unique solution \(v \in (0.13705, 0.81)\), such that

\[
\lambda(0.13705) = 0 \leq \lambda(x) = \frac{1 - \rho(x)}{2 \rho(x)} \leq \lambda(u) = \lambda(v) = (1 - d)/(2d),
\]

\[
\rho(u) = \rho(v) = d \leq \rho(x) = \frac{1/2}{\lambda(x) + 1/2} \leq 1 = \rho(0.13705).
\]

(2) The condition \(u \in [0.090000, 0.200000]\) is equivalent to each of the following conditions:

\[
\lambda(0.13705) = 0 \leq \lambda(x) = \frac{1 - \rho(x)}{2 \rho(x)} \leq \lambda(0.090000) = \lambda(0.200000) = 0.34396,
\]

\[
\rho(0.090000) = \rho(0.200000) = 0.59244 \leq \rho(x) = \frac{1/2}{\lambda(x) + 1/2} \leq 1 = \rho(0.13705).
\]

(3) The condition \(u \in [0.09411, 0.19291]\) is equivalent to each of the following conditions:

\[
\lambda(0.13705) = 0 \leq \lambda(x) = \frac{1 - \rho(x)}{2 \rho(x)} \leq \lambda(0.09411) = \lambda(0.19291) = \frac{1 - \rho}{2 \rho} = 0.30902,
\]

\[
\rho(0.09411) = \rho(0.19291) = \varphi \leq \rho(x) = \frac{1/2}{\lambda(x) + 1/2} \leq 1 = \rho(0.13705).
\]

(4) The condition \(x \in [8.956\% , 20.079\%]\) is equivalent to each of the following conditions:

\[
\lambda(0.13705) = 0 \leq \lambda(x) = \frac{1 - \rho(x)}{2 \rho(x)} \leq \lambda(8.956\%) = \lambda(20.079\%) = \lambda(\rho_0') = 0.34781,
\]

\[
\rho(8.956\%) = \rho(20.079\%) = \rho_0 \leq \rho(x) = \frac{1/2}{\lambda(x) + 1/2} \leq 1 = \rho(0.13705).
\]

(5) The condition \(x \in [0.10358, 0.17795]\) is equivalent to each of the following conditions:

\[
\lambda(0.13705) = 0 \leq \lambda(x) = \frac{1 - \rho(x)}{2 \rho(x)} \leq \lambda(0.10358) = \lambda(0.17795) = (\rho_0')^2 / 2 = 0.23279,
\]

\[
\rho(0.10358) = \rho(0.17795) = \rho_0 \leq \rho(x) = \frac{1/2}{\lambda(x) + 1/2} \leq 1 = \rho(0.13705).
\]

Remark 1. In west, through experiment or through practice observation, by using the relation between the GBR and the CPI, many researchers [1-14] can obtain the normal range of the GBR inflation rate as \(x \in [0.09, 0.20]\) from the normal range of the CPI as \(x \in [0.02, 0.05]\). But in TCE, from Yin Yang Wu Xing Theory, Zhang etc [21] have already determined: \(\rho_0 \leq \rho_1 \leq 1\) for the normal range of a healthy economy. Taking \(\rho_1 = \rho(x), \rho_2 = \rho(x)^2\) and \(\rho_3 = c \rho(x)\) where \(0 \leq c \leq 1\) for an economic society which has the capabilities of both intervention reaction and self-protection. From Corollary 2.1, the condition \(\rho_0 \leq \rho_1 \leq 1\) is equivalent to that \(x \in [8.956\%, 20.079\%]\). In other words, from theory of TCE, the normal range of the GBR inflation rate is considered as \(x \in [8.956\%, 20.079\%]\), nearly to \(x \in [9\%, 20\%]\). Of course, little difference of the two intervals which makes the diagnosis of disease as a result, there may be no much difference as a suspect. In fact, TCE uses the rule \(\rho_0 \leq \rho_1 \leq 1\) from Yin Yang Wu Xing Theory instead of the normal range of a GBR inflation rate. The equivalence of Corollary 2.1 shows that TCE is The scientific which is from TCM (Traditional Chinese Medicine).

Zhang etc [21] have already determined: an economy is said a healthy mathematical complex system when the intervention reaction coefficient \(\rho_1\) satisfies \(1 \geq \rho_1 \geq \rho_0\). In logic and practice, it’s reasonable that \(\rho_1 + \rho_2 = 1\) near to 1 if the input and output in a complex system is balanced, since a mathematical output subsystem is absolutely necessary other subsystems of all consumption. In case: \(\rho_1 + \rho_2 = 1\), all the energy for intervening mathematical complex subsystem can transmit to other mathematical complex subsystems which have neighboring relations or alternate relations with the intervening mathematical complex subsystem. The condition \(\rho_1 \geq \rho_0\) can be satisfied when \(\rho_2 = \rho_1 \rho_3\) and \(\rho_3 = \rho_3\) for a mathematical complex system since \(\rho_1 + \rho_2 = 1\) implies \(\rho_1 = \rho_3\). In this case, \(\rho_2 = \varphi^2 \approx 0.38197\). If this assumptions is set up, then the intervening principle: “Real disease with a healthy economy is to rush down his son and virtual disease is from TCM (Traditional Chinese Medicine).
and the interval \( x \in [0.09411, 0.19291] \) implies the following condition
\[ 1 \geq \rho_1 = \rho(x) \geq \rho_0 = \rho(0.09411) = \rho(0.19291) ; \]
and the interval \( x \in [8.956\%, 20.079\%] \) implies the following condition
\[ 1 \geq \rho_1 = \rho(x) \geq \rho_0 = \rho(8.956\%) = \rho(20.079\%) , \]
where
\[ \lambda(8.956\%) = \lambda(20.079\%) = \frac{1 - \rho_0}{2\rho_0} = \rho_0^2 \text{ since } (1 - \rho_0^3) = \left( \rho_0 + \rho_0^2 \right) ; \]
and the interval \( x \in [0.10358, 0.17795] \) implies the following condition
\[ 1 \geq \rho_1 = \rho(x) \geq \rho_0 = \rho(0.10358) = \rho(0.17795) . \]
where
\[ \lambda(0.10358) = \lambda(0.17795) = \frac{1 - \rho_0}{2\rho_0} = \left( \rho_0^3 \right)^2 / 2 \]
and
\[ (1 - \rho_0^3) = \left( \rho_0 + \rho_0^2 \right) ; \]
and the interval \( x \in [9\%, 20\%] \) is stable. The interval as the normal range of a GBR inflation rate may be also appropriate. To conservative estimates, one of the three intervals is used with the largest length, i.e., \( x \in [8.956\%, 20.079\%] \), as our theoretical analysis of the normal range. In fact, the range \( x \in [8.956\%, 20.079\%] \) is better than the range \( x \in [9\%, 20\%] \) because
\[ \rho_0 = \rho(8.956\%) = \rho(20.079\%) \]
and
\[ \lambda(8.956\%) = \lambda(20.079\%) = \frac{1 - \rho_0}{2\rho_0} = \rho_0^2 , \]
which satisfy the healthy balance conditions \( \rho_1 = \rho_3, \rho_2 = \rho_1^2 \) and \( (1 - \rho_2 \rho_3) \leq (\rho_1 + \rho_2 \rho_3) \) at the same time if \( \rho_1 = \rho_0, \rho_2 = \rho_0^3 \) and \( \rho_3 = c \rho_0 \) where \( c \to 1 \). In other words, the parameter \( \rho \) can be obtained as the normal range of the GBR inflation rate must be precise calculation to keep at least 6 decimal places can ensure correct because of its sensitivity to the diagnosis of economic society disease.

**Remark 2.** Western Economics is different from TCE because the TCE has a concept of Chi or Qi as a form of energy. From the energy concept, that one organ or subsystem of the economic society is not running properly (or disease, abnormal), is that the energy deviation from the average of the organ is too large, the high (real disease) or the low (virtual disease). But there do not exist these concepts of both real diseases and virtual diseases in Western economics. For the normal range of a GBR inflation rate of some economic society as \( x \in [8.956\%, 20.079\%] \), in TCE, if \( x > 20.079\% \), the economy is considered as a real disease since the GBR inflation rate is too high; if \( x < 8.956\% \), the economy is considered as a virtual disease since the GBR inflation rate is too low. Thus TCE identifies an important indicator for an economic society's health: the value of GBR inflation rate, which, under normal conditions, ranges from 8.956\% to 20.079\%. Outside this range (too low: Yin condition; too high: Yang condition), disease appears. Almost always absolutely, when there is a virtual disease, the condition of GBR inflation rate is a Yin condition; when there is a real disease, the condition of GBR inflation rate is a Yang condition.

**Remark 3.** Obviously, when applying the hypothesis of Theorem 2.1 and Corollary 2.1 to other fields rather than economic society's health, it is necessary to identify a global parameter in each field that is able to yield a general Yin or Yang condition in relation to the average behavior of the studied phenomenon, and that maintains the equations at a sufficiently simple level of writing and application. In fact, let \( x \in (\min, \max) \) where the values \( \min \) and \( \max \) are the minimum and maximum acceptable the index \( x \). Denoted the value \( t_0 \) is the target as the expectation of the index \( x \) such that \( \rho(t_0) = 1 \). In Eqs.(3) and (4), replace \( -0.1, 0.81, 0.13705 \) by \( \min, \max, t_0 \) respectively. The equivalent condition of a healthy economy \( \rho_0 \leq \rho(x) \leq 1 \) can be obtained as \( x \in [\min, \max) \), where \( \rho(\min) \leq \rho(x) \leq \rho(\max) \)

\[ \lambda(\min) = \lambda(x) = (1 - \rho(x)) / (2 \rho(x)) \leq \rho_0 = \lambda(\min) = \lambda(\max) \]
and
\[ \rho(u)^2 = \rho(v)^2 \leq \rho_2 = \rho_3 = \rho(x)^2 \leq \rho_1 = \rho(x) \leq 1 \]

### III. RELATIONS OF STEADY MULTILATERAL SYSTEMS

#### 3.1 Energy Changes of a Steady Multilateral System

In order to apply the reasoning to other fields rather than society's health, Zhang et al. [21] have started a steady multilateral system imitating economic society. A most basic steady multilateral system is as follows.

**Theorem 3.1** [20] For each element \( x \) in a steady multilateral system \( \mathcal{V} \) with two incompatibility relations, there exist five equivalence classes below:

\[ \mathcal{V} = \{ y \in \mathcal{V} | x \to y \} \]

\[ \mathcal{X} = \{ y \in \mathcal{V} | y \to x \} \]

\[ \mathcal{S} = \{ y \in \mathcal{V} | y \leftrightarrow x \} \]

where the five equivalence classes have relations in Figure 1.

**Remark** The Yin Yang Wu Xing model can be written as follows:Define

\[ V_0^e = X, V_1^e = X, V_2^e = X, V_3^e = X, V_4^e = X, V_5^e = X \]

\[ \mathcal{K} = \{ x \in \mathcal{V} | x \to y \} \]

\[ \mathcal{S} = \{ x \in \mathcal{V} | y \leftrightarrow x \} \]

and assume

\[ V^e = V_0^e + V_1^e + V_2^e + V_3^e + V_4^e + V_5^e \]

\[ V^e \cap V^e = \varnothing \]

\[ \forall i \neq j \]

And take

\[ \mathcal{R}^e = \{ (R_0^e, R_1^e, \ldots, R_5^e) \} \text{ satisfying} \]

\[ R^e = \sum_{i=0}^{5} V_i^e \times V_j^e = V_{\text{mult}(i,j)}^e \]

where

\[ V_{\text{mult}}^e \times V_{\text{mult}}^e = \{ (x, y) : x \in V_{\text{mult}}^e, y \in V_{\text{mult}}^e \} \]

is the Descartes product in set theory and

\[ R^e \times R^e = \{ (x, y) : \exists u \in V \text{ such that } (x, u) \in R^e, (u, y) \in R^e \} \]

is the multiplication relation operation. The relation multiplication of \( \times \) is isomorphic to the addition of module 5.
Then $(V^s, R^s)$ is a steady multilateral system with one equivalent relation $R^s_1$ and two incompatibility relations

\[ R^s_1 = (R^s_1)^{-1} \quad \text{and} \quad R^s_2 = (R^s_2)^{-1} \]

where \((R^s_2)^{-1} = \{(x, y) : (y, x) \in R^s_1\}\) is the inverse relation operation. The Yin and Yang means the two incompatibility relations and the Wu Xing means the collection of five disjoint classification of \(V^s = V^{s_1}_1 + V^{s_2}_2 + V^{s_3}_3 + V^{s_4}_4 + V^{s_5}_5\). The model is called Yin Yang Wu Xing model, denoted simply by \(V^s = \{0, 1, 2, 3, 4\}\).

It can be proved by Theorem 3.2 in Zhang [23] that the steady multilateral system in Theorem 3.1 is the reasoning model of Yin Yang Wu Xing in TCE if there is an energy function \(\mathcal{E}(X)\) satisfying

\[ \Delta \mathcal{E}(X) \Rightarrow \frac{d\mathcal{E}(X)}{dt} = -(\rho_1 - \rho_1^2 - \rho_2^2 - \rho_3^2) > 0; \]

\[ \Delta \mathcal{E}(X_1) \Rightarrow \frac{d\mathcal{E}(X_1)}{dt} = (\rho_3^2 + \rho_3^2 - \rho_3^2 - \rho_3^2) < 0; \]

\[ \Delta \mathcal{E}(X_2) \Rightarrow \frac{d\mathcal{E}(X_2)}{dt} = -(\rho_1 - \rho_1^2 - \rho_3^2) < 0; \]

\[ \Delta \mathcal{E}(X_3) \Rightarrow \frac{d\mathcal{E}(X_3)}{dt} = (\rho_3^2 + \rho_1^2 - \rho_3^2 - \rho_3^2) < 0; \]

\[ \Delta \mathcal{E}(X_4) \Rightarrow \frac{d\mathcal{E}(X_4)}{dt} = (\rho_3^2 + \rho_2^2 - \rho_3^2 - \rho_3^2) < 0; \]

if increase the energy of \(X : \Delta \mathcal{E}(X) > 0\).

The parameter \(\rho_1 = \rho_3 + \rho_2 \rho_3\) is called the coefficient of the vital or righteousness energy. The parameter \(\rho_2 = 1 - \rho_2 \rho_3\) is called the coefficient of the evil energy.

An economy is called healthy if the vital or righteousness coefficient \(\rho_1 = \rho_3 + \rho_2 \rho_3\) is greater than or equal to the evil coefficient \(\rho_2 = 1 - \rho_2 \rho_3\). Otherwise, the economy is called unhealthy. For a healthy economy, the transfer law of the Yang vital or righteousness energy in the Yin Yang Wu Xing model is

\[ \text{Wood}(X) \rightarrow \text{Fire}(X_1) \rightarrow \text{Earth}(X_2) \rightarrow \text{Metal}(X_3) \rightarrow \text{Water}(X_4) \rightarrow \text{Wood}(X). \]

Figure 1 in Theorem 3.1 is the figure of Yin Yang Wu Xing theory in Ancient China. The steady multilateral system \(V\) with two incompatibility relations is equivalent to the logic architecture of reasoning model of Yin Yang Wu Xing theory in Ancient China. What describes the general method of complex systems can be used in the economic society complex systems.

By non-authigenic logic of TCE, i.e., a logic which is similar to a group has nothing to do with the research object [20], in order to ensure the reproducibility such that the analysis conclusion can be applicable to any complex system, a logical analysis model can be chosen which has nothing to do with the object of study. The Tao model of Yin and Yang is a generalized one which means that two is basic. But the Tao model of Yin Yang is simple in which there is not incompatibility relation. The analysis conclusion of Tao model of Yin Yang cannot be applied to an incompatibility relation model. Thus the Yin Yang Wu Xing model with two incompatibility relations of Theorem 3.1 will be selected as the logic analysis model in this paper.

On the other hand, the steady multilateral system \((V^2, R^2) = (V^{2_1}_1, \{R^{2_1}_1, R^{2_1}_2\})\) is called the Tao model, denoted simply by \(V^2 = \{0, 1\}\), if it satisfies the following conditions:

\[ R^2_{c, r} = \sum_{r=0}^{1} V^2_{1, r} \times V^2_{2, r}, \quad \forall r \in \{0, 1\}, R^2_{c, r} \ast R^2_{c, r} = R^2_{mod(1+2, 3)}, \]

\[ R^2_0 = \{(0, 0), (1, 1), (0, 1), (1, 0)\}. \]

The relation multiplication of \(*\) is isomorphic to the addition of module 2. The element 1, or 0 is called a Yang force or a Yin force respectively. For a healthy economy, the transfer law of the Tao force in the Tao model is from Yang to Yin.

In TCE, any material can be found, not Yang is Yin. No matter of Yin and Yang are unable to see, known as dark matter, or nonphysical. Therefore, the Tao force is often exist in the physical world. Any steady multilateral system only force under the action of the Tao, may be to perceive.

Furthermore, the steady multilateral system \((V^n, R^n) = (V^{n_1}_1 + \ldots + V^{n_0}_0, \{R^{n_1}_1, \ldots, R^{n_0}_0\})\) is called the Telluric effluvium model, denoted simply by \(V^n = \{e, (12), (13), (23), (123), (132)\}\), if it satisfies the following conditions:

\[ R^n = \sum_{r=0}^{1} V^n_{1, r} \times V^n_{2, r}, \quad r \in \{0, 1\}, R^n_{c, r} \ast R^n_{c, r} = R^n_{mod(1+2, 3)}, \]

\[ R^n_0 = \{(0, 0, 1, 1), (0, 1, 1, 0)\}. \]

The number 1, or 2, or 3 is called the tengan (天元), the earth material (地元), the people ability (人元), respectively. The set of \(\{1, 2, 3\}\) is called three types of talent or material. It is with elements, \(e, (12), (13), (23), (123), (132)\), the primordial model (元气), essence derived from food (谷气), defensive energy (卫气), essential substance circulating in the channels and blood vessels (经气), genuine energy (真气), pectoral energy (宗气), respectively. Another name is respectively shaoyang ((e)(12), yangming ((12)) (13)), jueyin ((23)) (132), shaoyin ((123)) (132), taiyin ((132)) (132).

Generally positive or Yang material, they are able to be perceived, but few can see the material itself, can only use signs. Therefore, the Yang energy symptoms of the set \(M_1 = \{e, (12), (13)\}\) is called the narrow energy (气); The Yin energy of the set \(M_2 = \{(123)\}\) is called the blood energy (血); The Yin energy of the set \(M_3 = \{(132)\}\) is called the salvia energy (津); The Yin energy of the set \(M_4 = \{(23)\}\) is called the essence of water and grain (水谷精微).

Growth and conveyance in the six energies \(e, (12), (13), (23), (123), (132)\), known as the six roots (根); As the fruit of these six energies \(e, (12), (13), (23), (123), (132)\), known as the six fruits (果); Storage of these four energies \(M_1, M_2, M_3, M_4\), known as the four seas (四海); Energy exchange of the four kinds of \(M_1, M_2, M_3, M_4\), known as the four streets (四街). Of course, for a Healthy Economy, the transfer law of each of the six energies
e_{12}, e_{13}, e_{23}, e_{132}, e_{123}, is from its root (root-causes) (根) to its fruit (symptoms) (结).

Western Economy is different from TCE because the TCE has a concept of Chi or Qi ($\phi(x)$) as a form of energy of steady multilateral systems. It is believed that this energy exists in all things of steady multilateral systems (living and non-living) including air, water, food and sunlight. Chi is said to be the unseen vital force that nourishes steady multilateral systems’ Economy and sustains steady multilateral systems’ life. It is also believed that an individual is born with an original amount of Chi at the beginning of steady multilateral systems’ life and as a steady multilateral system grows and lives, the steady multilateral system acquires or attains Chi or energy from “eating” and “drinking”, from “breathing” the surrounding “air” and also from living in its environment. The steady multilateral system having an energy is called the anatomy system or the first physiological system. And the first physiological system also affords Chi or energy for the steady multilateral system’s meridian system (Zang Xiang (藏象) and Jing-Luo (经络)) which forms a parasitic system of the steady multilateral system, called the second physiological system of the steady multilateral system. The second physiological system of the steady multilateral system controls the first physiological system of the steady multilateral system. A steady multilateral system would become ill or dies if the Chi or energy in the steady multilateral system is imbalanced or exhausted, which means that $\rho_1 = p(x)\rightarrow 0$, $\rho_2 = p(x)^2\rightarrow 0$ and $\rho_3 = c\rho(x)\rightarrow 0$.

For example, in TCE, an economy as the first physiological system of the steady multilateral system following the Yin Yang Wu Xing theory was classified into five equivalence classes as follows:

- wood ($x_i$) = [industry, PPI (the Producer Price Index) or RPI (Retail Price Index)], liver, bravery, soul, ribs, sour, east, spring, birth;
- xiang-fire ($x_i^j$) = [agriculture, AAF (the total output value of Agriculture forestry Animal husbandry and Fishery), pericardium, the triple energizer, nerve, the blood, bitter taste, the south, summer, growth];
- earth ($x_i$) = [commerce, CPI (the Consumer Price Index)], spleen, stomach, willing, meat, sweetness, center, long summer, combined];
- metal ($x_i$) = [science-education, GBR (the General Budget Revenue)], lung, large intestine, boldness, fur, spicy, west, autumn, accept;
- water ($x_i$) = [army-economic, GDP (the Gross Domestic Product)], kidney, bladder, ambition, bone, salty, the north, winter, hiding;  
- jun-fire ($x_i^j$) = [President or Governor, Finance (the right of making money), heart, small intestine, bitter taste, whole economy, throughout the year, overall growth].

Based on the above, we have:

- fire ($x_i$) = xiang-fire ($x_i^j$) $\cup$ jun-fire ($x_i^j$).

There is only one of both loving and killing relations between every two classes. General close is loving, alternate is killing. In every category of internal, think that they are with an equivalent relationship, between each two of their elements there is a force of similar material accumulation of each other. It is because their pursuit of the goal is the same, i.e., follows the same “Axiom system”. It can increase the energy of the class at low cost near to zero if they accumulate together. Any nature material activity follows the principle of maximizing so energy or minimizing the cost. In general, the size of the force of similar material accumulation of each other is smaller than the size of the loving force or the killing force in a stable complex system. The stability of any complex system first needs to maintain the equilibrium of the killing force and the loving force. The key is the killing force. For a stable complex system, if the killing force is large, i.e., $\rho_3 = c\rho(x)$ becomes larger by Theorems 3.4 and 3.5 below, which needs positive exercise, then the loving force is also large such that the force of similar material accumulation of each other is also large. They can make the complex system more stable. If the killing force is small, i.e., $\rho_3 = c\rho(x)$ becomes smaller by Theorems 3.4 and 3.5 below, which means little exercise, then the loving force is also small such that the force of similar material accumulation of each other is also small. They can make the complex system becoming unstable. The Chi or energy is also called the food hereafter for simply. In order to get the food, by Attaining Rule in Zhang [23], the second physiological system must make the first physiological system intervened, namely exercise. It is because only by intervention on the first physiological system, the second physiological system can be to get food.

The second physiological system of the steady multilateral system controls the first physiological system of the steady multilateral system, abiding by the following rules.

**Definition 3.1 (Zangxiang (藏象))** Assume the Yin Yang Wu Xing model $V^3$ is implemented by the Tao force of the Tao model $V^2$. Then the steady multilateral system $V^2 \times V^3 = \{(i,j) | i \in V^2, j \in V^3\}$ is called the Zangxiang or the Five Zang-organs model of the steady multilateral system. The Zangxiang model satisfies as follows:

$$R_{(i,j)}^{m,n} = \sum_{(i,j)\in\mathbb{R}} V_i^{(m,5)} \times V_j^{(n,5)}$$

Each of the elements, (1,0), (O,0), (1,1), (O,1), (1,2), (O,2), (1,3), (O,3), (1,4), (O,4), is called respectively Jia(1,0), Yi(0,0), Bing(1,1), Ding(0,1), Wu(1,2), Ji(1,0), Geng(1,3), Xin(0,3), Ren(1,4), Gui(0,4), corresponding to the Chinese words respectively: 甲(1,0), 乙(0,0), 丙(1,1), 丁(0,1), 戊(1,2), 己(0,2), 庚(1,3), 辛(0,3), 壬(1,4), 癸(0,4), also corresponding to the notations in Theorem 3.1 respectively: $X^*_1(1,0), X^-_1(0,0), X^*_2(1,1), X^-_2(0,1), X^*_3(1,2), X^-_3(0,2), X^*_4(1,3), X^-_4(0,3), X^*_5(1,4), X^-_5(0,4)$. Here, each of the elements: $X_i X_j \cdot K_{i,j} \cdot S_i$ is called wood, fire, earth, metal, water, respectively, and this is **Yin. Yang, ** is Yin.

In TCE, an other name of the Zangxiang system is the ten Heavenly Stems (天干). It means in the changes of energy transmission, plays a major role, is under the power of...
positive (Yang), although it is invisible, the reason of behind
the sign.
In the ten heavenly stems, Yang is respectively:
Jia X ’(1,0) liking Yang wood, Bing X’ (1,1) liking Yang fire,
Wu X’ (1,2) liking Yang earth. Geng K’ (1,3) liking Yang metal,
Ren S’ (1,4) liking Yang water;

Yin is respectively:
Yi X’ (0,0) liking Yin wood. Ding X’ (0,1) liking Yin fire,
Qi X’ (0,2) liking Yin earth. Xin K’ (0,3) liking Yin metal,
Gui S’ (0,4) liking Yin water.

Yin is in the inside (里), Yang is in the outside (表). The relationship between the inside and the outside is the liking relationship.

The laws of the Zangxiang system or the ten Heavenly Stems model are summarized in Figure 2.

Definition 3.2 (Zangxiang) Assume the Telluric effluvium model $V^6$ is implemented by the Tao force of the Tao model $V^2$. Then the steady multilateral system $V^2 \times V^6 = \{ (i, j) | i \in V^2, j \in V^6 \}$ is called the Zangxiang or the Six Fu-organs model of the steady multilateral system.

The Zangxiang model satisfies as follows:

$$R_{i,j}^{(2,6,2)} = \sum_{(i,j) \in (0,1)} V_{i,j}^{(2,6,2)} \times V_{mod(i + 23, r^2)}^{(2,6)}, \forall (r,r') \in V^2 \times V^6$$

$$R_{i,j}^{(2,6,2)} = \prod_{(i,j) \in (0,1)} V_{mod(i + 23, r^2)}^{(2,6)}$$

Each of the elements,
(0,0) (1,0) (1,12) (1,12) (0,13) (0,13)
(0,23) (1,23) (0,132) (1,123) (0,123) (0,123)

is called respectively
Zi(0,0) Hai(0,1) Chen(0,12) Mao(1,12) Shen(0,13) Wei(1,13)

Chou(0,23) Xu(0,23) Yin(0,23) You(0,23) Wu(1,23)

Corresponding to the Chinese words respectively:
子(0,0) 亥(0,1) 辰(0,12) 卯(1,12) 申(0,13) 未(1,13)
丑(0,23) 戌(0,23) 卯(1,12) 酉(0,12) 寅(1,12)

Also corresponding to the notations in Theorem 3.1 as the five viscera and six entrails respectively:

$X^{i,0}(0,0) X^{i,0}(0,1) X^{i,0}(1,0) X^{i,0}(1,1) X^{i,0}(0,0) X^{i,0}(0,1) X^{i,0}(1,0) X^{i,0}(1,1)$

Here, each of the elements: $X, X_S, X_F, K, S, S_X, X_S$ is called wood, xiang-fire (相火), earth,metal,water, jun-fire (君火) respectively, and this is *+ Yang, *- Yin.

In TCE, another name of the Zangxiang system is the twelve Earthly Branches (地支). It means in the changes of energy transmission, plays a secondly role, is under the power of negative (Yin), although it is tangible, a sign of strength can be observed directly.

In the twelve earthly branches, Yang is respectively
Zi X’ (0,0) liking Yang wood, Hai X’ (0,1) liking Yang water, Chen X’ (0,12) liking Yang earth, Mao K’ (1,12) liking Yang wood, Shen S’ (0,13) liking Yang metal, Wei X’ (1,13) liking Yin earth;

Yin is respectively
Chou X’ (0,23) liking Yin earth, Xu X’ (1,23) liking Yang earth, Si X’ (0,132) liking Yin fire, Yin K’ (1,132) liking Yang wood, You S’ (0,123) liking Yin metal, Wu X’ (1,123) liking Yang fire.

Yin is in the inside (里), Yang is in the outside (表). The relationship between the inside and the outside is the liking relationship.

In the twelve earthly branches, other names of them are corresponding to the human body organs respectively:

Foot jueyin liver meridian (0,23),
Foot shaoyang gallladder meridian (0,e),
Hand jueyin pericardium meridian (1,23),
Hand shaoyang triple energizer meridian (1,e),
Foot taiyin spleen meridian (0,132),
Foot yangming stomach meridian (0,12),
Hand taiyin lung meridian (1,132),
Hand yangming large intestine meridian (1,12),
Foot shaoyin kidney meridian (0,123),
Foot taiyang bladder meridian (0,13),
Hand shaoyin heart meridian (1,123),
Hand taiyin small intestine meridian (1,13).

Or, respectively,

Foot jueyin liver meridian (0,23),
Foot shaoyang gallladder meridian (0,e),
Hand jueyin pericardium meridian (1,23),
Hand shaoyang triple energizer meridian (1,e),
Foot taiyin spleen meridian (0,132),
Foot yangming stomach meridian (0,12),
Hand taiyin lung meridian (1,132),
Hand yangming large intestine meridian (1,12),
Foot shaoyin kidney meridian (0,123),
Foot taiyang bladder meridian (0,13),
Hand shaoyin heart meridian (1,123),
Hand taiyin small intestine meridian (1,13).

The laws of the Zangxiang or the twelve Earthly Branches model are summarized in Figure 3.

In TCE, the Zangxiang and Jingluo models are not the anatomy systems as the first physiological system corresponding to their steady multilateral systems, are only them the mathematical logic models. If there are the Yin Yang Wu Xing model $V^6$, the Telluric effluvium model $V^6$ and the Tao model $V^2$, then the Zangxiang model $V^2 \times V^6$ and the Jingluo model $V^2 \times V^6$ must exist in logic. So they form a parasitic system of the Yin Yang Wu Xing system $V^6$, namely the second physiological system of the steady multilateral systems $V^2 \times V^6$ and $V^2 \times V^6$.

In TCE, the Zangxiang model cannot be observed directly, so it is hidden behind the Jingluo system, namely the Zangxiang (藏象) model. Chinese word "藏" is the meaning of the hidden behind. Therefore, only the twelve meridians can be observed. Began to grow the 12 kinds of energies of each place, referred to as the basic root-causes (本). To generate the results of the 12 kinds of energies, referred to as the symptoms (标). Management of the 12 kinds of energies of each system, known as meridians or the Jingluo systems. Of course, for a healthy Economy, the transfer law of each of the 12 kinds of energies is from its basic root-causes (本) to its symptoms (标).

In spite of the ten heavenly stems system cannot be observed, but it can be observed according to the reasoning of the twelve earthly branches system. So the logic relation of both the ten heavenly stems system and the twelve earthly branches system must be known.
Definition 3.3 (Logic Relation of Ten Heavenly Stems Hidden behind Twelve Earthly Branches) Logic Relation of Ten Heavenly Stems Hidden behind Twelve Earthly Branches must follow the relationship between the growth of the ten heavenly elements.

For the ten heavenly stems, although they are hidden in the 12 earthly branches, but the existing way is not completely the same. They each have 12 kinds of growth status: rowing (长生), bathing (沐浴), crowned (冠带), officer (临官), emperor (帝旺), decay (衰), disease (病), death (死), tomb (墓), extinction (绝), child (胎), raise (养).

According to the names of Yin and Yang attribute is different, their growth way also each are not identical. Yang heavenly stems energy transmission is energy transmitted along the twelve earthly branches, and Yin heavenly stems energy transfer is against the twelve earthly branches transmission of energy transmitted sequence.

The following ten heavenly stems are hidden behind the twelve earthly branches as follows: 
- Zi(0, e) = [Gui(0,4)], liking Yang water;
- Chou(0, (23)) = [Ji(0, 2), Gui(0,4), Xin(0,3)], liking Yin earth;
- Yin(1, (132)) = [Jia(1,0), Bing(1,1), Wu(1,2)], liking Yang wood;
- Mao(1, (12)) = [Yi(0,0)], liking Yin wood;
- Chen(0, (12)) = [Yi(0,0), Wu(1,2), Gui(0,4)], liking Yang earth;
- Si(0, (123)) = [Bing(1,1), Geng(1,3), Wu(1,2)], liking Yin fire;
- Wai(1, (132)) = [Ding(0,1), Ji(0,2)], liking Yang fire;
- Shen(0, (13)) = [Geng(1,3), Ren(1,4), Wu(1,2)], liking Yang metal;
- You(0, (123)) = [Xin(0,3)], liking Yin metal;
- Xu(1, (23)) = [Xin(0,3), Wu(1,2), Ding(0,1)], liking Yang earth;
- Hai(1, e) = [Ren(1,4), Jia(1,0)], liking Yin water.

All Logic Relations of Ten Heavenly Stems Hidden behind Twelve Earthly Branches are summarized in Figure 4.

See Figure 4. and Tables 1 and 2, all pure Yang: Jia, Bing, Geng, Ren of Ten Heavenly Stems are hidden behind Palms corners, clockwise for growth and officer. Only Yang earth: Wu of Ten Heavenly Stems is hidden behind Palms on both sides, clockwise for the growth, crowned, officer, disease and cemeteries.

All pure Yin: Yi, Ding, Xin, Gui of Ten Heavenly Stems are hidden behind the sides of the palms, counterclockwise to raise, crowned and officer. Only Yin earth: Ji of Ten Heavenly Stems is hidden behind Palms up and down, counterclockwise for the tomb, crowned and officer.

Property 3.1 (Ten Heavenly Stems Grow-Strong -Die -Extinction Hidden behind Twelve Earthly Branches) Ten heavenly stems under a number of laws, the ten heavenly stems inside the twelve earthly branches transmission rule can be gotten as follows. The five Yang heavenly stems: Jia, Bing, Wu, Geng, Ren was born by Hai, Yin, Yin, Si, Shen clockwise respectively; The five Yin heavenly stems: Yi, Ding, Ji, Xin, Gui was born by Wu, You, You, Zi, Mao counterclockwise respectively. Using mathematical language, all of these laws are summarized in Tables 1 and 2.

Property 3.2 (The rationality of the name of Twelve Earthly Branches) The following notations in Definition 3.2 is reasonable.

\[
\begin{align*}
X^+ & \quad X^+ & \quad X^+ & \quad K^+ & \quad S^+ & \quad X^+ \\
(0, e) & \quad (1, e) & \quad (0, (12)) & \quad (1, (12)) & \quad (0, (13)) & \quad (1, (13)) \\
X^- & \quad X^- & \quad X^- & \quad K^- & \quad S^- & \quad X^- \\
(0, (23)) & \quad (1, (23)) & \quad (0, (123)) & \quad (1, (123)) & \quad (0, (123)) & \quad (1, (123)).
\end{align*}
\]

It is with the correct meaning of the Yin Yang Wu Xing Model in Theorem 3.1.

Energy concept is an important concept in Physics. Zhang et al [21] introduce this concept to the steady multilateral systems or image mathematics [20] and uses these concepts to deal with the steady multilateral system diseases (mathematical index too high or too low). In mathematics, a steady multilateral system is said to have Energy (or Dynamic) if there is a non-negative function \(\rho(x)\) which makes every subsystem meaningful of the steady multilateral system. Similarly to Zhang et al [21], unless stated otherwise, any equivalence relation is the liking relation, any neighboring relation is the loving relation, and any alternate relation is the killing relationship.

Suppose that \(V\) is a steady multilateral system having an energy, then \(V\) in the steady multilateral system during a normal operation, its energy function for any subsystem of the steady multilateral system has an average (or expected value in Statistics), this state is called as normal when the energy function is nearly to the average. Normal state is the better state.

That a subsystem of the steady multilateral system is not running properly (or disease, abnormal) is that the energy deviation from the average of the subsystems is too large, the high (real disease) or the low (virtual disease).

In addition to study these real or virtual diseases, TCE is often not only considered the energy change (Attaining or Affording) of each element in the corresponding group, but also studied a kind of relation costs. There are three kinds of relationship between each two elements of the Zangxiang system or the Jingluo system, namely the merged, synthesized and combined.

The merged relationship between two the same elements \(x\) and \(y\) is the joining operation in a set, i.e., \([x] \cup [y] = [z]\).

The element \(z\) is the result of two the same elements \(x\) and \(y\) merging. The purpose of merging is in order to get the large result energy of element \(z\) through inputting two the same elements \(x\) and \(y\).

The synthesized relationship between two elements \(x\) and \(y\) is the multiply operation in the corresponding group system with a multiplication *, i.e., \(x*y = z\). The element \(z\) is the result of two elements \(x\) and \(y\) synthesized. The purpose of synthesized is in order to get the result energy of element \(z\) through inputting two elements \(x\) and \(y\).

The combined relationship between two elements \(x\) and \(y\) is the division operation in the corresponding group system with a multiplication *, i.e., \(x^{-1}*y = z\). The element \(z\) is the cost of two elements \(x\) and \(y\) combined. The purpose of combined is in order to maintain or strengthen the relation between \(x\) and \(y\) through inputting the cost element \(z\).

In general, a relationship cost is low if the cost element in the corresponding group is easy to get. A relationship cost is high, on the other hand, if the cost element in the corresponding is hard to come by.

In this case, in general, the GBR inflation rate \(x \in [8.9566\%, 20.0799\%]\) which means \(\rho_1 \leq \rho = \rho(x) \leq 1\). This relation cost is low because this relation cost element is easy to get. The low relation cost can
make the intervention increasing the sizes of both the intervention reaction coefficients $\rho_1, \rho_2$ and the self-protection coefficient $\rho_3$.

But in general, the GBR inflation rate \( x \in [8.956\%, 20.079\%] \) which means \( 0 < \rho_1 = \rho(x) < \rho_2 \). This relation cost is high because the relation cost element is hard to come by. The high relation cost can make the sizes of both the intervention reaction coefficients $\rho_1, \rho_2$ and the self-protection coefficient $\rho_3$ decreasing response to intervention.

The purpose of intervention is to make the steady multilateral system return to normal state. The method of intervention is to increase or decrease the energy of a subsystem.

What kind of intervening should follow the principle to treat it? Western mathematics emphasizes directly mathematical treatments on a disease subsystem after the disease of subsystem has occurred, but the indirect intervening of oriental mathematics is required before the disease of subsystem will occur. In mathematics, which is more reasonable?

Based on this idea, many issues are worth further discussion. For example, if an intervening has been implemented to a disease subsystem before the disease of subsystem will occur, what relation disease will be low cost which does not need to be intervened? what relation disease will be high cost which needs to be intervened?

3.2 Kinds of Relationship Costs of Steady Multilateral Systems

For a steady multilateral system $V$ with two incompatibility relations, suppose that the subsystems $X, X_i, X_K, K, S_X$ are the same as those defined in Theorem 3.1. Then the relation diseases can be decomposed into the following classes:

**Definition 3.4 (merged (合并), synthesized (化合或者合成) and combined (化合))** Suppose that both $x$ and $y$ are two elements of the Zangxiang system or the Jinguo system.

The **merged** relationship between two the same elements $x$ and $y$ is the joining operation in a set, i.e., \( \{ x \} \cup \{ y \} = \{ z \} \).

The element $z$ is the result of two the same elements $x$ and $y$ merging. The purpose of merging is in order to get the large result energy of element $z$ through inputting two the same elements $x$ and $y$.

The **synthesized** relationship between two elements $x$ and $y$ is the multiply operation in the corresponding group system with a multiplication *, i.e., $x^*y = z$.

The element $z$ is the result of two elements $x$ and $y$ synthesized. The purpose of synthesized is in order to get the result energy of element $z$ through inputting two elements $x$ and $y$.

The **combined** relationship between two elements $x$ and $y$ is the division operation in the corresponding group system with a multiplication *, i.e., $x^\#y = z$.

The purpose of combined is in order to maintain or strengthen the relation between $x$ and $y$ through inputting the cost element $z$.

**Property 3.3** Suppose that both $x$ and $y$ are two elements of the Zangxiang system. Then the following statements are true.

1. **The lowest cost element is**

   \[ \text{Yi}(O, O) = \text{Ji}(O, O) = X^-(O, O). \]

   **The second low cost is**

   \[ \text{Jia}(1, O) = \text{Yi}(1, O) = X^+(1, O). \]

   **The third low cost is**

   \[ \text{Ding}(O, 1) = \text{Bing}(O, 1) = X = (O, O). \]

   **The fourth low cost is**

   \[ \text{Bing}(1, 1) = \text{Jia}(1, 1) = X = (0, 0). \]

   **The highest cost element**

   \[ \text{Ji}(2, 2) = \text{Jia}(2, 2) = X = (2, 2). \]

   **The second high cost is**

   \[ \text{Bing}(2, 1) = \text{Jia}(2, 1) = X = (2, 1). \]

   **The synthesized relationships of the ten Heavenly Stems at zero costs are as follows:**

   The ten heavenly stems synthesized (十天干合化)

   \[ \text{Jia}(1, 0) * \text{Ji}(0, 2) = \text{Wu}(1, 2) \rightarrow \text{Yang} \text{ earth} \ (\text{甲己合化土}), \]

   \[ \text{Yi}(0, 0) * \text{Geng}(1, 3) = \text{Geng}(1, 3) \rightarrow \text{Yang} \text{ metal} \ (\text{乙丙合化金}), \]

   \[ \text{Bing}(1, 1) * \text{Geng}(0, 3) = \text{Ren}(1, 4) \rightarrow \text{Yang} \text{ water} \ (\text{丙辛合化水}), \]

   \[ \text{Wu}(1, 2) * \text{Gui}(0, 4) = \text{Bing}(1, 1) \rightarrow \text{Yang} \text{ fire} \ (\text{戊癸合化火}). \]

   **(4) The combined relationships of the ten Heavenly Stems at low costs are as follows:**

   \[ \text{Jia}(1, 0) \text{ and Yi}(0, 0) \text{ like Ji}(1, 0) \text{ and Yi}(0, 0) \text{ (甲乙同类乙甲)}, \]

   \[ \text{Jia}(1, 0) * \text{Ji}(0, 2) = \text{Wu}(1, 2) \rightarrow \text{Yin} \text{ wood} \ (\text{甲己合化土}), \]

   \[ \text{Yi}(0, 0) * \text{Geng}(1, 3) = \text{Yi}(0, 0) \rightarrow \text{Yin} \text{ wood} \ (\text{甲乙合化金}), \]

   **The third low cost is**

   \[ \text{Ji}(0, 2) * \text{Ji}(0, 2) = \text{Yi}(0, 0) \rightarrow \text{Yin} \text{ wood} \ (\text{乙丙合化金}), \]

   \[ \text{Bing}(1, 1) * \text{Ding}(0, 1) = \text{Bing}(1, 1) * \text{Ding}(0, 1) \rightarrow \text{Yin} \text{ wood} \ (\text{丙辛合化水}), \]

   \[ \text{Wu}(1, 2) * \text{Ji}(0, 2) = \text{Wu}(1, 2) * \text{Ji}(0, 2) \rightarrow \text{Yin} \text{ wood} \ (\text{戊癸合化火}). \]
Ren(1,4) and Gui(0,4) like Ren(1,4) and Gui(0,4) (壬癸同类同癸)
(Ren(1,4)) * Ren(1,4) = Yi(0,0) = Yin wood (壬壬比肩),
(Ren(1,4)) * Gui(0,4) = Jia(1,0) = Yang wood (壬癸劫财),
(Gui(0,4)) * Ren(1,4) = Jia(1,0) = Yang wood (壬癸比肩),
(Gui(0,4)) * Gui(0,4) = Yi(0,0) = Yin wood (癸癸比肩),
Jia(1,0) and Yi(0,0) love Bing(1,1) and Ding(0,1) (甲乙丙丁)
(Jia(1,0)) * Bing(1,1) = Ding(0,1) = Yin fire (甲丙偏印)
(Jia(1,0)) * Ding(0,1) = Bing(1,1) = Yang fire (甲丙正印),
(Yi(0,0)) * Bing(1,1) = Bing(1,1) = Yang fire (乙丙正印),
(Yi(0,0)) * Ding(0,1) = Ding(0,1) = Yin fire (乙丙偏印),
Bing(1,1) and Ding(0,1) love Wu(1,2) and Ji(0,2) (丙丁生戊己)
(Bing(1,1)) * Wu(1,2) = Ding(0,1) = Yin fire (丙丁偏印),
(Bing(1,1)) * Ji(0,2) = Bing(1,1) = Yang fire (丙丁正印),
(Ding(0,1)) * Wu(1,2) = Bing(1,1) = Yang fire (丁戊印),
(Ding(0,1)) * Ji(0,2) = Ding(0,1) = Yin fire (丁戊正印),
Wu(1,2) and Ji(0,2) love Geng(1,3) and Xin(0,3) (戊己生庚辛)
(Wu(1,2)) * Geng(1,3) = Ding(0,1) = Yin fire (戊戊偏印),
(Wu(1,2)) * Xin(0,3) = Bing(1,1) = Yang fire (戊戊正印),
(Ji(0,2)) * Geng(1,3) = Bing(1,1) = Yang fire (己己正印),
(Ji(0,2)) * Xin(0,3) = Ding(0,1) = Yin fire (己己偏印)

Geng(1,3) and Xin(0,3) love Ren(1,4) and Gui(0,4) (庚辛生壬癸)
(Geng(1,3)) * Ren(1,4) = Ding(0,1) = Yin fire (庚庚偏印),
(Geng(1,3)) * Gui(0,4) = Bing(1,1) = Yang fire (庚庚正印),
(Xin(0,3)) * Ren(1,4) = Bing(1,1) = Yang fire (辛辛正印),
(Xin(0,3)) * Gui(0,4) = Ding(0,1) = Yin fire (辛辛偏印);
Ren(1,4) and Gui(0,4) love Jia(1,0) and Yi(0,0) (壬癸甲乙)
(Ren(1,4)) * Jia(1,0) = Ding(0,1) = Yin fire (壬壬偏印),
(Ren(1,4)) * Yi(0,0) = Bing(1,1) = Yang fire (壬壬正印),
(Gui(0,4)) * Jia(1,0) = Bing(1,1) = Yang fire (癸癸偏印),
(Gui(0,4)) * Yi(0,0) = Ding(0,1) = Yin fire (癸癸正印).

(5) The combined relationships of the ten Heavenly Stems are at highest costs as follows:

Jia(1,0) and Yi(0,0) kill Wu(1,2) and Ji(0,2) (甲乙丙丁)
(Jia(1,0)) * Wu(1,2) = Ji(0,2) = Yin earth (甲乙偏相克),
(Jia(1,0)) * Ji(0,2) = Wu(1,2) = Yang earth (甲乙正相克),
(Yi(0,0)) * Wu(1,2) = Wu(1,2) = Yang earth (乙丙偏相克),
(Yi(0,0)) * Ji(0,2) = Jia(1,0) = Yin earth (乙丙正相克),
Wu(1,2) and Ji(0,2) kill Ren(1,4) and Gui(0,4) (丙丁戊己)
(Wu(1,2)) * Ren(1,4) = Xin(0,3) = Yin metal (戊己偏相克),
(Wu(1,2)) * Gui(0,4) = Geng(1,3) = Yin metal (戊己正相克),
(Ji(0,2)) * Ren(1,4) = Geng(1,3) = Yin metal (己己正相克),
(Ji(0,2)) * Gui(0,4) = Xin(0,3) = Yin metal (己己偏相克)
Ren(1,4) and Gui(0,4) kill Bing(1,1) and Ding(0,1) (壬癸克丙丁)
(Ren(1,4)) * Bing(1,1) = Ji(0,2) = Yin earth (壬癸偏相克),
(Ren(1,4)) * Ding(0,1) = Wu(1,2) = Yin earth (壬癸正相克),
(Gui(0,4)) * Bing(1,1) = Wu(1,2) = Yin earth (癸癸偏相克),
(Gui(0,4)) * Ding(0,1) = Ji(0,2) = Yin earth (癸癸正相克),
Bing(1,1) and Ding(0,1) kill Geng(1,3) and Xin(0,3) (丙丁克庚辛)
(Bing(1,1)) * Geng(1,3) = Ji(0,2) = Yin earth (丙丁偏相克),
(Bing(1,1)) * Xin(0,3) = Wu(1,2) = Yang earth (丙丁正相克),
(Ding(0,1)) * Geng(1,3) = Wu(1,2) = Yang earth (丁戊正相克),
(Ding(0,1)) * Xin(0,3) = Ji(0,2) = Yin earth (丁戊偏相克)

The ten heavenly stems rushing (十天干相冲)
(Jia(1,0)) * Geng(1,3) = Xin(0,3) = Yin metal (甲乙相冲),
(Yi(0,0)) * Xin(0,3) = Xin(0,3) = Yin metal (乙丙相冲),
(Ren(1,4)) * Bing(1,1) = Ji(0,2) = Yin earth (丙丁相冲),
(Gui(0,4)) * Ding(0,1) = Ji(0,2) = Yin earth (丁戊相冲),
(Wu(1,2)) * Ji(0,2) = Jia(1,0) = Yang wood (戊己无冲).

All relation laws of the Zangxiang system or the ten Heavenly Stems model are summarized in Figure 2. It means that both the liking relation and the loving relation have the low cost, but the killing relation has high cost. #

Property 3.4 Suppose that both x and y are two elements of the Jingluo system.

Then the following statements are true.
(1) The lowest cost elements are as follows: Chou(0,23) = Xi(0,23) = X(0,23) = 阴宫气 to liver (肝),
You(0,132) = Yi(0,132) = K(0,132) = 阴宗气 to spleen (脾),
Wu(0,123) = Xi(0,123) = K(0,123) = 阴卫气 to bladder (膀胱).

The highest cost elements are as follows: Zuo(0,0) = 阴元气 to gallbladder (胆),
Chen(0,12) = Xue(0,12) = Xue(0,12) = 阴卫气 to stomach (胃),
Shen(0,123) = 阴身气 to heart (心).
(2) The highest relation cost elements are as follows: Hai(1,1) = 阳宫气 to triple energizer (三焦),
Mao(1,12) = 阳宗气 to large intestine (大肠),
Wei(1,13) = 阳卫气 to small intestine (小肠).

(3) The merged and synthesized relationships of the twelve Earthly Branches at zero costs are as follows:

Number three rendezvous (地支三会局) { Yin(1,132), Mao(1,12), Chen(0,132) } → { Yang wood, Yang wood, Yang earth)
(寅卯辰会东方木),
{ Si(0,132), Wu(1,123), Wei(1,132) } → { Yin fire, Yang fire, Yin earth)
(寅卯辰会南方火),
{ Shen(0,13), You(0,123), Xie(1,123) } → { Yang metal, Yin metal, Yang earth)
(寅卯辰会西方金),
{ Hai(1,1), Zuo(0,0), Chou(0,23) } → { Yin water, Yang water, Yin earth)
(寅卯辰会北方水),
Number six synthesized (地支六合化) Zuo(0,0) * Chou(0,23) = Xie(1,123) → { Yang earth (子丑化化土),
Yin(1,132) * Hai(1,1) = Si(0,132) → { Yin(1,132) → { Yin(1,132) → { Yin(1,132) → { Yin wood (寅亥合木),
Mao(0,12)*Xu(1,23)=Shen(0,132),
→ Yin fire (卯戌化合火),
Chen(0,12)*You(0,123)=Shen(0,13),
→ Yang metal (辰酉化合金),
Si(0,132)*Shen(0,13)=Chou(0,23),
Chou(0,23)*Chou(0,23)=Zi(0,e),
→ Yang water (巳申化合水),
Wu(1,123)*Wei(1,13)=Chen(0,0,12),
→ Yang earth (未午化合土).
(4) The combined relationships of the twelve Earthly Branches at low costs are as follows:
Number six combined (地支三合局)
(Shen(0,13)) *Zi(0, e)=Shen(0,13),
(Wei(1,13)) *Hai(1, e)=You(0,123),
(Chen(0,12)) *You(0,123)=Shen(0,13),
→ Yang water (申子辰化合水局);
(Hai(1,e)) *Mao(1,12)=Chen(0,12),
(Mao(1,12)) *Wei(1,13)=You(0,123),
(Wei(1,13)) *Hai(1, e)=Shen(0,13),
Shen(0,13) *Chen(0,12) *Hai(1, e)=Yin(1,132),
→ Yang wood (亥卯丑化合木局);
(Yin(1,132)) *Wu(1,123)=Si(0,132),
(Wu(1,123)) *Xu(1,23)=Chen(0,12),
(Xu(1,23)) *Yin(1,132)=Shen(0,13),
Xu(1,23) *Chen(0,12)=Wu(1,123),
→ Yang fire (未午戌化合火局);
(Si(0,132)) *You(0,123)=Si(0,132),
(You(0,123)) *Chou(0,23)=Chou(0,23),
(Chou(0,23)) *Si(0,132)=Shen(0,13),
Mao(0,12) *You(0,123)=Shen(0,13),
→ Yang metal (巳酉丑化合金局).
Number six combined (地支六合)
[Zi(0,e)] *Chou(0,23)=Chou(0,23),
[You(0,123)] *Hai(1,e)=Yin(1,132),
[You(0,123)] *Hai(1,e)=Yin(1,132),
→ Yin earth (子丑化合土),
[Yin(1,132)] *Hai(1,e)=You(0,123),
[You(0,123)] *Hai(1,e)=Yin(1,132),
→ Yang wood (寅亥化合木),
[Mao(0,12)] *Xu(1,23)=Si(0,123),
→ Yin fire (卯戌化合火),
[Chen(0,12)] *You(0,123)=Shen(0,13),
→ Yang metal (辰酉化合金),
[Si(0,132)] *Shen(0,13)=Chen(0,12),
[Chen(0,12)] *You(0,123)=Shen(0,13),
→ Yang water (巳申化合水),
[Wu(1,123)] *Wei(1,13)=Chou(0,23),
→ Yin earth (未午化合土).
(5) The combined relationships of the twelve Earthly Branches at high costs are as follows:
Number six violated (地支六害)
(Zi(0,e)) *Wei(1,13)=Wei(1,13),
→ Yin earth (未午化合土),
[Chou(0,23)] *Wei(1,13)=Mao(0,12),
→ Yin wood (巳申化合水),
[You(0,123)] *Shen(0,13)=Hai(1,e),
→ Yin water (寅卯化合木),
[Mao(0,12)] *Chen(0,12)=Hai(1,e),
→ Yin water (卯辰化合木),
[Shen(0,13)] *Hai(1,e)=Wei(1,13),
→ Yin earth (申巳化合土),
[You(0,123)] *Wei(1,13)=Mao(0,12),
→ Yin wood (酉戌化合木).
Number six rushed (地支三冲)
(Zi(0,e)) *Wei(1,13)=Mao(0,12),
→ Yang fire (子午化合火),
(Chou(0,23)) *Wei(1,13)=Mao(0,12),
→ Yang wood (亥卯化合木),
(You(0,123)) *Shen(0,13)=Hai(1,e),
→ Yin earth (卯申化合木),
[Mao(0,12)] *You(0,123)=Wei(1,13),
→ Yin earth (卯申化合木),
[Si(0,132)] *Hai(1,e)=Wei(1,13),
→ Yin earth (亥卯化合木).
Number three purity shed (地支三刑)
a) Three-elements punishment (三元刑,环刑)
(No punishment of kindness (无恩之刑))
(Yin(1,132)) *Si(0,132)=Hai(1,e),
→ Yin water (寅巳冲),
[Si(0,132)] *Shen(0,13)=Mao(0,12),
→ Yin earth (巳申冲),
[Shen(0,13)] *You(0,123)=Mao(0,12),
→ Yin wood (申巳冲).
b) Three-elements punishment (三元刑,环刑)
(The power of punishment (持势之刑))
(Chou(0,23)) *Wei(1,13)=Wei(1,13),
→ Yin water (午未冲),
(Chou(0,23)) *Wei(1,13)=Wei(1,13),
→ Yin metal (午未冲),
(Wei(1,13)) *Chou(0,23)=Wu(1,123),
→ Yin fire (未午冲).
c) Two-elements punishment (二元刑,对刑)
(A punishment of rude (无礼之刑))
(Zi(0,e)) *Mao(0,12)=Mao(0,12),
→ Yin wood (卯酉相合),
[Chou(0,23)] *Mao(0,12)=Mao(0,12),
→ Yin wood (卯酉相合),
[Chou(0,23)] *Mao(0,12)=Mao(0,12),
→ Yin wood (卯酉相合),
[R(1,e)) *Hai(1,e)=Zi(0,e),
→ Yin water (亥卯相合).
All relation laws of the Jingluo system or the twelve Earthly Branches model are summarized in Figure 3. It means that the Your palm in Figure 3, all transverse relationship with low cost, but all vertical relationship with high cost. On the other hand, in the three types: [Yin,Mao), [Wu,Wei], [Xu,Hai] or the three types: [Chen,Shi], [Shen,You], [Zi,Shou] for the vertices of the triangle respectively, the relationship between the cost is low. Otherwise, the relationship between the cost is high.
3.3 First Transfer Laws of Economic Society Energies of Steady Multilateral Systems with a healthy Economy
Suppose that a steady multilateral system $V$ having energy function $\Phi(x)$ is normal or healthy. Let $x$ be the GBR inflation rate of $V$. Taking $\rho_1=\rho(x), \rho_2=\rho(x^2)$.
and \( \rho_3 = c \rho(x) \) where \( 0 \leq c \leq 1 \) and \( \rho(x) \) is defined in Eqs.(3) and (4). The healthy economy means that the conditions \( \rho_0 \leq \rho(x) \leq 1 \) and \( 0 < c \leq 1 \) hold. By Corollary 2.1, it is equivalent to the normal range \( x \in [8.956\%, 20.079\%] \) or the healthy condition \( \rho_1 + \rho_2 \rho_3 \geq 1 - \rho_2 \rho_3 \). That \( c \to 0 \) implies that the economy is without the ability of self-protection, i.e., \( \rho_3 = c \rho(x) \to 0 \). Of course, the economy cannot be healthy. It is because for any \( x \neq 0.13705 \), when \( c \to 0 \), there are
\[
\rho_1 + \rho_2 \rho_3 = \rho(x) + c \rho(x)^3 \to \rho(x) < 1 - c \rho(x)^3 = 1 - \rho_2 \rho_3,
\]
such that the healthy condition \( \rho_1 + \rho_2 \rho_3 \geq 1 - \rho_2 \rho_3 \) cannot hold.

By using Corollary 2.1 and Theorems 2.1 and 3.1, the following Theorems 3.2 and 3.3 can be obtained as the transfer law of occurrence and change of economic society energies with a healthy economy.

**Theorem 3.2 (The transfer law of the ten Heavenly Stems with a healthy economy)** Let the GBR inflation rate \( x \in [8.956\%, 20.079\%] \) which is equivalent to the conditions \( \rho_0 \leq \rho_1 = \rho(x) \leq 1 \) and \( 0 < c \leq 1 \).

The transfer law of each of the 10 kinds of energy in the the Zangxiang system or the ten Heavenly Stems model is from its root-causes to its symptoms. Furthermore, for the healthy economy, the transfer law of the Yang vital or righteousness energies of the ten heavenly stems is transferring along the loving or liking order of the ten heavenly stems as follows:

\[
\begin{align*}
K_+^+ (1,(12)) & \rightarrow \text{real Mao} \\
K_+^+ (0,(13)) & \rightarrow \text{real Shen} \\
K_+^+ (1,(123)) & \rightarrow \text{real Wei} \\
K_+^+ (1,(0,2)) & \rightarrow \text{real You} \\
K_+^+ (0,(123)) & \rightarrow \text{real Si} \\
\end{align*}
\]

And the transfer law of the Yin vital or righteous energies of the ten heavenly stems is transferring against the loving or liking order of the ten heavenly stems as follows:

\[
\begin{align*}
S_+^+ (1,(0,13)) & \rightarrow \text{real Yi} \\
S_+^+ (1,(1,2)) & \rightarrow \text{real Xin} \\
S_+^+ (1,(0,123)) & \rightarrow \text{real Geng} \\
S_+^+ (0,(1,2)) & \rightarrow \text{real Ji} \\
S_+^+ (0,(0,123)) & \rightarrow \text{real Di} \\
\end{align*}
\]

All transfer laws of the Zangxiang system or the ten Heavenly Stems model for a healthy economy are summarized in Figure 2. It means that only both the liking relation and the adjacent relation have the transfer law of the Yang or Yin vital or righteousness energies of the ten heavenly stems. Yang is transferring along the loving or liking order of the ten heavenly stems. Yin is transferring against the loving or liking order of the ten heavenly stems.

**Theorem 3.3 (The transfer law of the twelve Earthly Branches with a healthy economy)** Let the GBR inflation rate \( x \in [8.956\%, 20.079\%] \) which is equivalent to the conditions \( \rho_0 \leq \rho_1 = \rho(x) \leq 1 \) and \( 0 < c \leq 1 \). The transfer law of each of the 12 kinds of energy in the Jingluo system or the twelve Earthly Branches model is from its root-causes to its symptoms.

Furthermore, for the healthy economy, the transfer law of the Yang vital energies of the twelve earthly branches is transferring along the loving or liking order of the twelve earthly branches as follows:

\[
\begin{align*}
K_+^+ (1,(12)) & \rightarrow \text{virtual Mao} \\
K_+^+ (0,(13)) & \rightarrow \text{virtual Shen} \\
K_+^+ (1,(123)) & \rightarrow \text{virtual Wei} \\
K_+^+ (0,(123)) & \rightarrow \text{virtual You} \\
K_+^+ (1,(0,13)) & \rightarrow \text{virtual Si} \\
\end{align*}
\]

The transfer law of the Yin vital energies of the twelve earthly branches is transferring against the loving or liking order of the ten heavenly stems as follows:

\[
\begin{align*}
S_+^+ (0,(13)) & \rightarrow \text{real Zi} \\
S_+^+ (1,(1,2)) & \rightarrow \text{real Hai} \\
S_+^+ (1,(0,23)) & \rightarrow \text{real Chou} \\
S_+^+ (0,(1,23)) & \rightarrow \text{real Wu} \\
\end{align*}
\]

All transfer laws of the Jingluo system or the twelve Earthly Branches model for a healthy economy are summarized in Figure 3. It means that only both the liking relation and the adjacent relation have the transfer law of the Yang or Yin vital or righteousness energies of the twelve earthly branches. Yang is transferring along the loving or liking order of the twelve earthly branches. Yin is transferring against the loving or liking order of the twelve earthly branches. #

**Remark 4.** Theorems 3.2 and 3.3 are called the transfer law of occurrence and change of economy energies with a healthy economy, simply, the first transfer law.

For a Yang energy of \( X \) and the Zangxiang system or the ten Heavenly Stems model for a healthy economy, the first transfer law is transferring along the loving or liking order of the ten heavenly stems as follows:
At this point, the paper and the X c x c follow. Taking and , implies that , i.e., It is the method can strengthen both the value the greater the use. In other words again, if be the

\[ \begin{align*}
\text{virtual } X^- & \iff \text{virtual } X^+ \\
\text{virtual } S^- & \iff \text{virtual } S^+ \\
\text{real } K^- & \iff \text{real } K^+ \\
\text{real } X^- & \iff \text{real } X^+ \\
\text{virtual } X^- & \iff \text{virtual } X^+ \\
\text{virtual } X^- & \iff \text{virtual } X^+. 
\end{align*} \]

For a Yang energy of X and the Jingluo system or the twelve Earthly Branches model for a healthy economy, the first transfer law is transferring against the loving or liking order of the twelve earthly branches as follows:

\[ \begin{align*}
\text{real Chou } X^+ & \iff \text{real Zi } X^+ \\
\text{real Hai } X^+ & \iff \text{real Xu } X^- \\
\text{real You } S^- & \iff \text{real Shen } S^+ \\
\text{real Wei } X^+ & \iff \text{real Wu } X^- \\
\text{virtual Si } X^- & \iff \text{virtual Chen } X^+ \\
\text{virtual Mao } K^- & \iff \text{virtual Yin } K^+ \\
\text{real You } S^- & \iff \text{real Shen } S^+ \\
\text{real Chou } X^- & \iff \text{real Zi } X^+. 
\end{align*} \]

For a Yin energy of X and the Jingluo system or the twelve Earthly Branches model for a healthy economy, the first transfer law is transferring against the loving or liking order of the twelve earthly branches as follows:

\[ \begin{align*}
\text{virtual } X^- & \iff \text{virtual } X^+ \\
\text{virtual } S^- & \iff \text{virtual } S^+ \\
\text{real } K^- & \iff \text{real } K^+ \\
\text{real } X^- & \iff \text{real } X^+ \\
\text{virtual } X^- & \iff \text{virtual } X^+ \\
\text{virtual } X^- & \iff \text{virtual } X^+. 
\end{align*} \]

For a Yin energy of X and the Zangxiang system or the ten Heavenly Stems model for a healthy economy, the first transfer law is transferring against the loving or liking order of the ten heavenly stems as follows:

\[ \begin{align*}
\text{virtual } X^- & \iff \text{virtual } X^+ \\
\text{virtual } S^- & \iff \text{virtual } S^+ \\
\text{real } K^- & \iff \text{real } K^+ \\
\text{real } X^- & \iff \text{real } X^+ \\
\text{virtual } X^- & \iff \text{virtual } X^+ \\
\text{virtual } X^- & \iff \text{virtual } X^+. 
\end{align*} \]

For a Yang energy of X and the Jingluo system or the twelve Earthly Branches model for a healthy economy, the first transfer law is transferring against the loving or liking order of the twelve earthly branches as follows:

\[ \begin{align*}
\text{real Chou } X^+ & \iff \text{real Zi } X^+ \\
\text{real Hai } X^+ & \iff \text{real Xu } X^- \\
\text{real You } S^- & \iff \text{real Shen } S^+ \\
\text{real Wei } X^+ & \iff \text{real Wu } X^- \\
\text{virtual Si } X^- & \iff \text{virtual Chen } X^+ \\
\text{virtual Mao } K^- & \iff \text{virtual Yin } K^+ \\
\text{real You } S^- & \iff \text{real Shen } S^+ \\
\text{real Chou } X^- & \iff \text{real Zi } X^+. 
\end{align*} \]

For a Yin energy of X and the Jingluo system or the twelve Earthly Branches model for a healthy economy, the first transfer law is transferring against the loving or liking order of the twelve earthly branches as follows:

\[ \begin{align*}
\text{virtual } X^- & \iff \text{virtual } X^+ \\
\text{virtual } S^- & \iff \text{virtual } S^+ \\
\text{real } K^- & \iff \text{real } K^+ \\
\text{real } X^- & \iff \text{real } X^+ \\
\text{virtual } X^- & \iff \text{virtual } X^+ \\
\text{virtual } X^- & \iff \text{virtual } X^+. 
\end{align*} \]
The transfer law of each of the 12 kinds of energy in the Jingluo system or the twelve Earthly Branches model for an unhealthy economy is from its root-causes to its symptoms.

Furthermore, for the unhealthy economy, if a subsystem $x$ of a steady multilateral system $V$ falls a real disease, then the disease comes from the mother $s$ of $x$. The transfer law of the Yang vital energies of the twelve earthy branches is transferring against the killing or liking order of the twelve earthy branches as follows:

\[
\begin{align*}
K'_{2x}(1,(12)) & \iff X'_{2x}(0,e) \iff X'_{2x}(0,(12))
\end{align*}
\]

For the unhealthy economy, if a subsystem $x$ of a steady multilateral system $V$ falls a virtual disease, then the disease comes from the son of $x$. The transfer law of the Yin vital energies of the twelve earthly branches is transference along the killing or liking order of the twelve earthly branches as follows:

\[
\begin{align*}
K'_{2x}(1,(12)) & \implies X'_{2x}(0,e) \implies X'_{2x}(0,(12))
\end{align*}
\]
GBR for the metal Subsystem based on Zangxiang and Jingluo—Mathematical Reasoning of Economic Intervening Principle Based on Yin Yang Wu Xing Theory in Traditional Chinese Economics (III)

less \Rightarrow \text{virtual } X^+ \Leftrightarrow \text{virtual } X^+
\text{rare} \Rightarrow \text{virtual } X^+_k \Leftrightarrow \text{virtual } X^+_k
\text{rare} \Rightarrow \text{virtual } X^+_S \Leftrightarrow \text{virtual } X^+_S
\text{rare} \Rightarrow \text{virtual } X^+_S \Leftrightarrow \text{virtual } X^+_S
\text{more} \Rightarrow \text{real } K^+_X \Leftrightarrow \text{real } K^+_X
\text{less} \Rightarrow \text{virtual } X^+ \Leftrightarrow \text{virtual } X^+.

For a Yang energy of \( X \) and the Zangxiang system or the ten Heavenly Stems model for an unhealthy economy, the second transfer law is transferring against the killing or liking order of the ten heavenly stems as follows:
less \Leftrightarrow \text{real } X^+ \Leftrightarrow \text{real } X^-
\text{rare} \Leftrightarrow \text{real } K^+_X \Leftrightarrow \text{real } K^+_X
\text{rare} \Leftrightarrow \text{real } X^+_S \Leftrightarrow \text{real } X^+_S
\text{rare} \Leftrightarrow \text{real } S^+_X \Leftrightarrow \text{real } S^+_X
\text{more} \Leftrightarrow \text{virtual } X^+_S \Leftrightarrow \text{virtual } X^+_K
\text{less} \Leftrightarrow \text{real } X^+ \Leftrightarrow \text{real } X^-.

For a Yin energy of \( X \) and the Jingluo system or the twelve Earthly Branches model for an unhealthy economy, the second transfer law is transferring along the killing or liking order of the twelve earthly branches as follows:
less \Leftrightarrow \text{virtual } Zi \ X^+ \Leftrightarrow \text{virtual } Chou \ X^-
\text{rare} \Rightarrow \text{virtual } Si \ X^+_k \Leftrightarrow \text{virtual } Chen \ X^+_k
\text{rare} \Rightarrow \text{virtual } Shen \ S^+_X \Leftrightarrow \text{virtual } You \ S^+_X
\text{rare} \Rightarrow \text{virtual } Wu \ X^+_S \Leftrightarrow \text{virtual } Wei \ X^+_S
\text{less} \Rightarrow \text{virtual } Hai \ X^+_S \Leftrightarrow \text{virtual } Xu \ X^+_S
\text{more} \Rightarrow \text{real } Yin \ K^+_X \Leftrightarrow \text{real } Mao \ K^+_X
\text{less} \Rightarrow \text{virtual } Zi \ X^+ \Leftrightarrow \text{virtual } Chou \ X^-.

For a Yang energy of \( X \) and the Jingluo system or the twelve Earthly Branches model for an unhealthy economy, the second transfer law is transferring against the killing or liking order of the twelve earthly branches as follows:
less \Leftrightarrow \text{real } Zi \ X^+ \Leftrightarrow \text{real } Chou \ X^-
\text{less} \Leftrightarrow \text{real } Yin \ K^+_X \Leftrightarrow \text{real } Mao \ K^+_X
\text{less} \Leftrightarrow \text{real } Hai \ K^+_X \Leftrightarrow \text{real } Xu \ X^+_S
\text{less} \Leftrightarrow \text{real } Wu \ X^+_S \Leftrightarrow \text{real } Wei \ X^+_S
\text{less} \Leftrightarrow \text{real } Shen \ S^+_X \Leftrightarrow \text{real } You \ S^+_X
\text{more} \Rightarrow \text{virtual } Si \ X^+_k \Leftrightarrow \text{virtual } Shen \ X^+_k
\text{less} \Rightarrow \text{real } Zi \ X^+ \Leftrightarrow \text{real } Chou \ X^-.

The transfer relationship of the second transfer law running is the killing or liking relationship, denoted by \( \Rightarrow \) or \( \Leftrightarrow \). The running condition of the second transfer law is both \( (\rho_1 + \rho_2) < (1 - \rho_1 \rho_2) \text{ and } \rho_1 = c \rho(x) > 0 \).

By Theorem 2.1 and Corollary 2.1, the running condition is equivalent to both \( \rho_1 > \rho_1 = \rho(x) > 0 \) and \( 1 \geq c > 0 \). That \( \rho_1 = c \rho(x) \rightarrow 0 \) means the lack of capability of self-protection. Of course, it is the basis condition of running the second transfer law.

The stopping condition of the second transfer law is both \( (\rho_1 + \rho_2 \rho_3) \geq (1 - \rho_1 \rho_2) \text{ and } \rho_3 = c \rho(x) > 0 \) which is the running condition of the first transfer law, or, the existence condition of capabilities of both intervention reaction and self-protection. To follow or utilize the running of the second transfer law is equivalent to the following method. For dong so, it is to protect and maintain the killing or liking relationship of the steady multilateral system. The method can strengthen all of both \( \rho_1 - \rho_3 = \rho(x)(1 - c) \) and \( \rho_2 - \rho_1 \rho_3 = \rho(x)^2 (1 - c) \) tending to be small at the same time. In other words, using the method can make \( c \) tends to be large for a fixed \( \rho(x) > 0 \). It is because the transferring condition of the killing or liking relation disease \( (\rho_1 + \rho_2 \rho_3) < (1 - \rho_1 \rho_2) \) is the weaker the use, which due to \( \rho_3 = c \rho(x) \) is the greater the use. The transferring way can make both \( \rho_1 - \rho_3 \rightarrow 0 \) and \( \rho_2 - \rho_1 \rho_3 \rightarrow 0 \) at the same time such that the killing or liking relation disease cannot be transferred. In other words again, if the treatment principle of the killing relationship diseases is to use continuously abiding by the second transfer law, then the coefficient of self-protection will tend to be the occurrence state, i.e., \( \rho_3 = c \rho(x) > 0 \) where \( 1 \geq \rho \geq 1 - \rho(x) > 0 \), and the coefficients of intervention reaction also will tend to the healthy state, i.e., \( 0 \leq \rho \leq 1 \text{ such that } (\rho_1 + \rho_2 \rho_3) \geq (1 - \rho_1 \rho_2) \).

Medical and drug resistance problem is that such a question, beginning more appropriate medical treatment, but is no longer valid after a period. In the state \( \rho_1 - \rho_3 = \rho(x)(1 - c) \rightarrow 0 \), \( \rho_2 - \rho_1 \rho_3 = \rho(x)^2 (1 - c) \rightarrow 0 \), by Theorems 3.2 and 3.3, any medical and drug resistance problem is non-existence if the treatment principle of TCE is used. But in the state \( \rho_1 - \rho_3 = \rho(x)(1 - c) \rightarrow 0 \), \( \rho_2 - \rho_1 \rho_3 = \rho(x)^2 (1 - c) \rightarrow 0 \), by Theorems 3.4 and 3.5, the medical and drug resistance problem is always existence, even if the treatment principle of TCE has been used. It is because virtual \( x \) cannot kill real \( x \) if \( X \) is intervened by increasing its energy. In other words, the lack of capability of self-protection, i.e., \( \rho_3 = c \rho(x) \rightarrow 0 \) implies the possible existence of a medical and drug resistance problem, although the treatment principle of TCE has been used. At this point, the paper advocates to follow or utilize the second transfer law in order to prevent and avoid the medical and drug resistance issue occurrence for the unhealthy economy.

IV. TREATMENT PRINCIPLE OF TCE

In order to explain treatment principle of TCE, the changes in the range of GBR inflation rate is divided into four parts. From [20], Theorems 2.1, 3.1-3.5, Properties 3.1-3.4 and Corollary 2.1, it can be easily proved that the following theorem is true.

Theorem 4.1 Suppose that the subsystem \( X \) of a steady multilateral system falls ill. Let \( X \) be the economy GBR.
inflation rate of the steady multilateral system. Denoted the parameters of the normal range as follows
\[ \alpha = 8.956\%, \beta = 20.079\%, t_0 = 13.705\%. \]
Then the following statements are true.

(1) Suppose that \( x < \alpha \) as virtual, in which \( x \) or \( x_b \) falls a virtual disease with an unhealthy economy. The subsystem \( X \) or \( x_b \) itself is the root-cause of a happened virtual disease. And the son \( x_s \) of \( x \) is the symptoms of an expected or a happened virtual disease. The primary treatment is to increase the energy of the subsystem \( X \) or \( x_b \) directly. And the secondary treatment is to increase the energy of the son \( x_s \) of \( x \), and at the same time, to decrease the energy of the prisoner \( x_a \) of \( x \).

(2) Suppose that \( x \in [\alpha, t_0) \) as virtual-normal, in which \( x \) or \( x_s \) will fall a virtual disease with a healthy economy. The mother \( S_x \) of \( x \) is the root-cause of an expected virtual disease. And the subsystem \( X \) or \( x_s \) is the symptoms of an expected virtual disease. The primary treatment is to increase the energy of the mother subsystem \( S_x \) of \( X \) which is an indirect treating for \( x \). And the secondary treatment is to increase the energy of \( X \) itself, and at the same time, to decrease the energy of the prisoner \( x_a \) of \( X \). 

(3) Suppose that \( x \in [t_0, b) \) as real-normal, in which \( X \) or \( x_s \) will encounter a real disease with a healthy economy. The son \( x_b \) of \( X \) is the root-cause of an expected real disease. And the subsystem \( X \) itself is the symptoms of an expected real disease. The primary treatment is to decrease the energy of the son subsystem \( x_b \) of \( X \) which is an indirect treating for \( X \). And the secondary treatment is to decrease the energy of \( X \) itself, and at the same time, to increase the energy of the bane \( x_a \) of \( X \).

(4) Suppose that \( x > b \) as real, in which \( x \) or \( x_b \) encounters a real disease with an unhealthy economy. The subsystem \( x \) or \( x_b \) itself is the root-cause of an expected or a happened real disease. And the mother \( S_x \) of \( x \) is the symptoms of an expected real disease. The primary treatment is to decrease the energy of the subsystem \( x \) or \( x_b \) directly. And the secondary treatment is to decrease the energy of the mother \( S_x \) of \( x \), and at the same time, to increase the energy of the bane \( x_a \) of \( x \).

Remark 6. Treatment principle of Theorem 4.1 based on ranges of the economy GBR inflation rate is called the treatment principle of TCE, since it is in order to protect and maintain the balance of two incompatibility relations: the loving or liking relationship and the killing or liking relationship.

For the unhealthy economy where \( x < \alpha \) or \( x > b \), the treatment principle is the method for doing so in the following:

The primary treatment is to increase or decrease the energy of \( X \) directly corresponding to \( x < \alpha \) or \( x > b \) respectively, and the secondary treatment is to increase the energy of \( x_a \) or \( x_b \) while to decrease the energy of \( x_a \) or \( x_b \) respectively.

The primary treatment is in order to protect and maintain the loving or liking relationship, abiding by TCE’s ideas “Virtual disease with an unhealthy economy is to fill itself” and “Real disease with an unhealthy economy is to rush down itself”. It is because the method for doing so is not only greatly medical diseases of their own, but also provides the pseudo side effects as the food for the second physiological system. The method is to promote the first physiological system running since the second physiological system controls the first physiological system. And it is also to improve the loving or liking relationship to develop since the loving or liking relationship mainly comes from the first physiological system. The loving or liking relationship to develop can strengthen both that \( \rho_1 + \rho_2 + \rho_3 = \rho(x) + c \rho(x)^2 \) tends to be large and that \( 1 - \rho_2 - \rho_3 = 1 - c \rho(x)^3 \) tends to be small at the same time. In other words, the way can make all of both \( \rho(x) \) and \( c \) tend to be large, at least, \( c \) greater than zero for an unhealthy economy and \( \rho_0 \leq \rho(x) \leq 1 \), such that the economy from unhealthy to healthy, or the first physiological system works, or, the occurrence of capability of self-protection, or, the running of the first transfer law, or, the stopping of the second transfer law.

The secondary treatment is in order to protect or maintain the killing or liking relationship, abiding by TCE’s ideas “Don’t have disease cure cure non-ill” and “Strong inhibition of the same time, support the weak”. By the second transfer law in Theorems 3.4 and 3.5, the more serious relation disease is the relation disease between virtual \( x_a \) and real \( k_s \), or between real \( x_b \) and virtual \( x_b \) respectively.

Abiding by TCE’s idea “Don’t have disease cure cure non-ill”, it must be done to prevent or avoid the more serious relation disease between virtual \( x_s \) and real \( k_s \), or between real \( x_s \) and virtual \( x_s \) occurrence respectively.

Abiding by TCE’s idea “Strong inhibition of the same time, support the weak”, it must be done to increase the energy of \( x_s \) or \( x_b \) while decrease the energy of \( x_a \) or \( x_b \) respectively.

The method for doing so can improve the killing or liking relationship to develop since real \( x_s \) or \( x_b \) can kill virtual \( x_s \) or \( S_x \) respectively. The killing or liking relationship to develop means that both \( \rho_1 - \rho_2 = \rho(x)(1 - c) \) and \( \rho_2 - \rho_1 \rho_3 = \rho(x)^2 (1 - c) \) tend to be small at the same time. In other words, the way can make, for fixed \( \rho(x) \), \( c \) tending to be large, at least, greater than zero for an unhealthy economy, such that the economy from unhealthy to healthy, or the first physiological system works, or, the occurrence of capability of self-protection, or, the running of the first transfer law, or, the stopping of the second transfer law.

For the healthy economy where \( x \in [\alpha, t_0] \) or \( x \in (t_0, b] \), the treatment principle is the method for doing so in the following:
The primary treatment is to increase or decrease the energy of $S_x$ or $S_x$ corresponding to $x \in [a, t_0^i]$ or $x \in (t_0, b]$ respectively, and the secondary treatment to increase the energy of $K_x$ or $X$ while to decrease the energy of $X$ or $X_k$, respectively.

The primary treatment is in order to protect and maintain the loving or liking relationship, abiding by TCE’s ideas “Virtual disease with a healthy economy is to fill mother” and “Real disease with a healthy economy is to rush down its son”. It is because the method for doing so is not only greatly medical diseases of their own, but also provides the pseudo side effects as the food for the second physiological system. The method is to promote the first physiological system running since the second physiological system controls the first physiological system. And it is also to improve the loving or liking relationship developing since the loving or liking relationship mainly comes from the first physiological system. The loving or liking relationship developing can strengthen both that $\rho_1 + \rho_2 + \rho_3 = \rho(x_1) + c \rho(x_2)$ tends to be large and that $1 - \rho_2 + \rho_3 = 1 - c \rho(x_1)$ tends to be small at the same time. In other words, the way can make all of both $\rho(x_1)$ and $0 < c$ tending to be large, the best, all equal to $1$ for a healthy economy, such that the capability of self-protection is in the best state, or, the non-existence of side effects issue, or, the non-existence of medical and drug resistance problem.

The secondary treatment is in order to protect or maintain the killing or liking relationship, abiding by TCE’s ideas “Don’t have disease cure cure non-ill” and “Strong inhibition of the same time, support the weak”. By the first transfer law, the more serious relation disease is the relation disease between real $x$ and virtual $K_x$ or between virtual $x$ and real $X$ corresponding to real $x$ or virtual $x$, respectively.

Abiding by TCE’s idea “Don’t have disease cure cure non-ill”, it must be done to prevent and avoid the more serious relation disease between real $x$ and virtual $K_x$ or between virtual $x$ and real $X$ occurrence corresponding to real $X$ or virtual $x$ respectively.

Abiding by TCE’s idea “Strong inhibition of the same time, support the weak”, it must be done to increase the energy of $K_x$ or $x$ while decrease the energy of $x$ or $X$ respectively.

The method for doing so can improve the killing or liking relationship developing since real $K_x$ or real $X$ can kill virtual $x$ or virtual $X$, respectively. The killing or liking relationship developing also means that both $\rho_1 - \rho_2 = \rho(x)(1 - c)$ and $\rho_2 - \rho_3 = \rho(x^2)(1 - c)$ tend to be small at the same time. In other words, using the way can make, for fixed $\rho(x)$, $0 < c$ tending to be large, the best, equal to $1$ for a healthy economy, such that the capability of self-protection is in the best state, or, the non-existence of side effects, or, the non-existence of medical and drug resistance problem.

V. CHINESE GBR FOR THE METAL SUBSYSTEM

Suppose that $M_x$ as issued in the circulation of money and GDP as Gross Domestic Product in Chinese from 1990 to 2014, the annual GBR and the annual GBR inflation rates can be measured in Table 3.

Also watching Table 3, the state of the GBR inflation rate is: virtual, virtual-normal, real, real-normal, real-normal, real-normal, for 1991-1996, respectively. During this period of time, large-scale goods have been made.

It means that the subsystem metal($K_x$) of the economic social system with a healthy economy encounters an expected real economic disease since the GBR inflation rate belongs to “science, education, and public facilities” of metal($K_x$).

But also watching Table 3, the state of the PPI inflation rate is: virtual-normal, real-normal, real, real, real-normal, for 1991-1996, respectively.

It means that the subsystem wood($x$) of the economic social system with an unhealthy economy encounters a real economic disease since the PPI inflation rate belongs to “industry” of wood($x$).

There are two subsystems wood($x$) and metal($K_x$) which have the killing relationship and fall a real disease or an expected real disease. By Definition 3.2 in Zhang [23], the relation economic disease is rare because real-normal metal($K_x$) cannot kill real wood($x$) which cannot destroy the balance of the killing relation from metal($K_x$) to wood($x$). If metal($K_x$) is intervened such that it is from real to virtual, then there is a more serious disease to occur since virtual metal($K_x$) cannot kill real wood($x$). Thus the mainly root-cause is the real disease of the subsystem wood($x$).

So, at present the most serious problem is to treat the subsystem wood($x$) falling a real disease for an unhealthy sub-economy. It is the case in (4) of Theorem 4.1 for wood($x$).

By (4) of Theorem 4.1, the subsystem wood($X$) itself is the root-cause of a happened real disease. And the mother subsystem water($S_x$) is the symptoms of an expected real disease.

By (4) of Theorem 4.1 again, the primary treatment is to decrease the energy of the subsystem wood($X$) directly. And the secondary treatment is to decrease the energy of the mother water($S_x$) of wood($X$), and at the same time, to increase the energy of the bare earth($X_{x}$) of water($S_x$).

In fact, the Chinese government did just that. For 1993-1999, not only had decreased gradually the financial amounts of investment in the manufacture (to decrease the energy of the subsystem wood($X$) directly), but also had decreased investment in the Army, such as, big disarmament, a freeze on a large number of military engineering, etc. (for decreasing the energy of water($S_x$)) while had increased little by little the workers’ wages, the social security and social welfare, such as, the public accumulation fund for housing construction, pension funds, medical insurance, unemployment insurance, etc.(to increase the energy of earth($X_{x}$)).
Also watching Table 3, the state of the GBR inflation rate is: real-normal, real-normal, real-normal, real-normal, real, real-normal, real-normal, for 1997-2003, respectively. During this period of time, mass goods cannot be made. Supplies are still scarce. Rush on still appear on the market.

It means that the subsystem metal(\(x_k\)) is with a healthy sub-economy and falling an expected real disease. It is because the GBR inflation rate belongs to the “science, education, public facilities” of metal(\(x_k\)).

Also watching Table 3, the state of the CPI inflation rate is: virtual-normal, virtual, virtual, virtual, virtual, virtual, virtual, for 1997-2003, respectively.

It means that the subsystem earth(\(x_k\)) of the economic social system with an unhealthy economy encounters a virtual economic disease since the CPI inflation rate belongs to the “commerce” of earth(\(X_k\)).

Also watching Table 3, the state of the PPI inflation rate is virtual-normal, virtual, virtual, virtual, virtual, virtual, for 1997-2003, respectively.

It means that the subsystem wood(\(x\)) falls a virtual disease for an unhealthy economy since the PPI inflation rate belongs to the “industry” of wood(\(X\)).

There are three subsystems wood(\(x\)), metal(\(x_k\)) and earth(\(X_k\)) in which both wood(\(x\)) and earth(\(X_k\)) are virtual but metal(\(x_k\)) is real. By Definition 3.2 in Zhang [23], the relation disease between virtual wood(\(x\)) and virtual earth(\(X_k\)) is rare since virtual wood(\(x\)) cannot kill virtual earth(\(X_k\)) which cannot destroy the balance of the killing order from wood(\(x\)) to earth(\(X_k\)). But if the subsystem earth(\(X_k\)) is intervened such that it is from virtual to real, there is a more serious relation disease between virtual wood(\(x\)) and real earth(\(X_k\)). It is because the virtual wood(\(x\)) cannot kill the real earth(\(X_k\)) which can destroy the balance of the killing relation from wood(\(x\)) to earth(\(X_k\)).

So, at present the most serious problem is to treat the subsystem wood(\(x\)) falling a virtual disease for an unhealthy sub-economy. It is the case in (1) of Theorem 4.1 for wood(\(x\)).

By (1) of Theorem 4.1, the subsystem earth(\(X_k\)) itself is the root-cause of a happened virtual disease. And the son subsystem metal(\(X_k\)) of earth(\(X_k\)) is the symptoms of an expected virtual disease.

By (1) of Theorem 4.1, the primary treatment is gotten to increase the energy of the subsystem wood(\(x\)) directly. And the secondary treatment is gotten to increase the energy of the son fire(\(x_k\)) of wood(\(x\)), and at the same time, to decrease the energy of the prisoner metal(\(X_k\)) of fire(\(x_k\)).

In fact, the Chinese government did just that. For 1999-2008, not only had increased gradually the financial amounts of investment in the manufacture (e.g., to invest in real estate, to increase the energy of the subsystem wood(\(x\)) directly), but also had increased to make money, and investment in the agriculture, such as, exempt from the agricultural taxation, increase of agricultural land expropriation compensation, etc. (to increase the energy of fire(\(x_k\)) including jun-fire(\(x_k\)) and xiang-fire(\(x_k\))) while had decreased in the science and education, such as, a small amount of teachers and researchers for a raise, schools and research institutions self-sustaining, etc. (to decrease the energy of metal(\(X_k\))).

Therefore, application of nature for the treatment principle of TCE by the Chinese government had brought the sustained and rapid growth of industry economy for 1991-2008.

Also watching Table 3 again, the state of the GBR inflation rate is: real, real-normal, real, real, real-normal, virtual-normal, real, real, for 2004-2011, respectively. During this period of time, large-scale goods have been still made. But a lot of society problems begin occurring.

It means the subsystem metal(\(x_k\)) is mainly with an unhealthy sub-economy and falls a real disease. It is because the GBR inflation rate belongs to the “science, education, public facilities” of metal(\(x_k\)). Observation of the whole economic and social five subsystems, it can be found that there is a virtual disease state of the subsystem earth(\(X_k\)).

In fact, also watching Table 3 again, the state of the CPI inflation rate is: real-normal, virtual, virtual, real-normal, real, virtual, virtual-normal, real-normal, for 2004-2011, respectively.

It means the subsystem earth(\(X_k\)) is mainly with an unhealthy sub-economy and falls an expected virtual disease. It is because the CPI inflation rate belongs to the “commerce” of earth(\(X_k\)).

Also watching Table 3 again, the state of the PPI inflation rate is virtual-normal, virtual-normal, virtual-normal, real-normal, real-normal, virtual, virtual-normal, real-normal, for 2004-2011, respectively.

It means the subsystem wood(\(x\)) is mainly with a healthy sub-economy and falls an expected real disease. It is because the manufacture of large-scale goods or the normal PPI inflation rate belongs to “industry” of the subsystem wood(\(x\)).

There are three subsystems wood(\(x\)), metal(\(X_k\)) and earth(\(X_k\)) in which both metal(\(X_k\)) and wood(\(x\)) are real or real-normal but earth(\(X_k\)) is virtual. For an unhealthy economy, the key relationship is killing. By Definition 3.2 in Zhang [23], the relation disease between real wood(\(x\)) and virtual earth(\(X_k\)) is less since real-normal wood(\(x\)) can kill virtual earth(\(X_k\)) which cannot destroy the killing order from wood(\(x\)) to earth(\(X_k\)). Now the subsystem earth(\(X_k\)) can be intervened such that it is from virtual to real-normal.

So, at present the most serious problem is to treat the subsystem earth(\(X_k\)) falling a virtual disease. It is the case in (1) of Theorem 4.1 for earth(\(X_k\)).

By (1) of Theorem 4.1, the subsystem earth(\(X_k\)) itself is the root-cause of a happened virtual disease. And the son subsystem metal(\(X_k\)) of earth(\(X_k\)) is the symptoms of an expected virtual disease.
The $x_k$ as $x$ in theorem 4.1, using (1) of Theorem 4.1 again, the primary treatment is gotten to increase the energy of the subsystem earth($x_k$) directly. And the secondary treatment is gotten to increase the energy of the son metal($k_x$) of earth($x_k$), where $(X_k)_x = K_{x}$ in Figure 1, and at the same time, to decrease the energy of the bane wood($x$) of earth($x_k$), where $K_{x_k}x = X$ in Figure 1.

In fact, the Chinese government did just that. For 2004-2014, not only had increased the financial amounts of investment in commerce, such as, strengthen the support for the WTO trade, etc. (to increase the energy of the subsystem earth($x_k$) directly), but also had increased investment in science, education and public facilities, such as to build high speed rail, etc. (to increase the energy of metal($k_x$)) while had reduced the industrial support, such as, the appreciation of the RMB, etc. (to decrease the energy of wood($x$)).

Therefore, again application of nature for the treatment principle of TCE by the Chinese government had brought the 2004-2014 economic taking off again.

Also watching Table 3 again and again, the state of the GBR inflation rate is: virtual-normal, virtual-normal, virtual, for 2012-2014, respectively.

It means that the subsystem metal($k_x$) is mainly with a healthy economy and will fall an expected virtual disease. It is because the GBR inflation rate belongs to the “science, education, public facilities” of metal($k_x$).

Also watching Table 3 again and again, the state of the GDP inflation rate is: virtual-normal, virtual-normal, virtual-normal, for 2012-2014, respectively.

It means the subsystem water($s_x$) is mainly with a healthy economy and will fall an expected virtual disease. It is because the GDP inflation rate belongs to the “army-economics” of water($s_x$).

Also watching Table 3 again and again, the state of the PPI inflation rate is: virtual-normal, virtual-normal, virtual-normal, for 2012-2014, respectively.

It means that the the subsystem wood($x$) is also an expected virtual disease for a healthy sub-economy. It is because the manufacture of large-scale goods or the PPI inflation rate belongs to the “industry” of the subsystem wood($x$).

The virtual-normal disease of wood($x$) is not because of its low energy, but because of its energy is too high to make producing products too much, so much so that there is no way to sell products, low profit of industrial production. In the TCE, this disease is Yang irritability turned to deficiency disease. This disease is not the current urgent problems since it cannot destroy the killing order balance of the economy.

There are three subsystems wood($x$), metal($k_x$) and water($s_x$) in which all are virtual-normal. Both metal($k_x$) and wood($x$) have the killing relationship. And others are the loving relationship. For a healthy economy, the key relationship is loving. Most likely from Yang to deficiency is wood($x$). But if this virtual-normal disease of wood($x$) is continuously to develop such that it is from virtual-normal to virtual, by Theorems 3.2 and 3.3, the virtual wood($x$) will make its mother subsystem water($s_x$) falling a virtual economic disease when it encounters an economic disease. In fact, the economic indicators of GDP which belongs to the subsystem water($s_x$) is beginning to decline. Abiding by TCE’s idea “Don’t have economic disease cure cure non-ill”, the prevention and treatment of the current work is the need to prevent the virtual disease of the subsystem water($s_x$) for a healthy sub-economy.

So, at present the most serious problem is to treat the subsystem water($s_x$) falling a virtual disease with a healthy sub-economy of the subsystem water($s_x$). It is the case in (2) of Theorem 4.1 for water($s_x$).

By (2) of Theorem 4.1, the mother subsystem metal($k_x$) of water($s_x$) is the root-cause of an expected virtual disease. And the subsystem water($s_x$) itself is the symptoms of an expected virtual disease.

The $s_x$ as $x$ in (2) of Theorem 4.1, the primary treatment is gotten to increase the energy of the mother subsystem metal($k_x$) of the water($s_x$), where $s_{s_x_k} = K_{s}$ in Figure 1. And the secondary treatment is gotten to increase the energy of the water($s_x$) itself while decrease the energy of the prisoner fire($x$) of the water($s_x$), where $(s_x)_x = X$ in Figure 1.

In fact, the Chinese government also is doing just that. Since 2015, not only has increased continuously investment in science, education and public facilities, such as, One Belt and One Road, etc. (for increasing the energy of metal($k_x$)), but also has increased to military spending (to increase the energy of the water($s_x$)) while has reduced the number of making money, and reduced the agricultural support, such as, reduce the purchase price of agricultural products, etc. (to decrease the energy of fire($s_x$)) including jun-fire($x_j$) and xiang-fire($x_i$). Therefore, again and again application of nature for the treatment principle of TCE by the Chinese government will lead to economic continue to glory since 2015.

VI. CONCLUSIONS

This work shows how to treat the diseases of a economy by using the GBR inflation rate $\chi$. For the GBR inflation rate, the normal range of theory is [8.956%, 20.079%] nearly to [9%, 20%]; and the center is 13.705% nearly to 14%. By both the Zangxiang system or the ten Heavenly Stems model and the Jingluo system or the twelve Earthly Branches model, there are the first or second transfer law of economic energies corresponding to a healthy economy or an unhealthy economy respectively. The first or second transfer law of economic energies changes according to the different economy’s GBR inflation rate whether in the normal range or not. For the normal range, the first transfer law of economic energies in Theorems 3.2 and 3.3 run; For the abnormal range,
the second transfer law of economic energies in Theorems 3.4 and 3.5 run.
Assume that the range of economy’s GBR inflation rate \( x \) is divided into four parts from small to large. Both second and third are for a healthy economy with a virtual or real disease respectively. In this case, the root-cause of a virtual or real disease is the mother or son of the falling-ill subsystem \( x \) respectively, and the symptoms is the subsystem \( x \) itself. Abiding by TCE’s idea: “Searching for a root cause of disease in cure, treatment of both the root-cause and symptoms at the same time” (治病求本, 标本兼治), the works are first the prevention or the treatment for the mother or son of a virtual or real disease respectively, the second the prevention or the treatment for a more serious relation disease between virtual \( x \) and real \( k_x \), respectively. Both the root-cause and the symptoms come from the first transfer law of economic energies in Theorems 3.2 and 3.3.

And both first and fourth are for an unhealthy economy with a virtual or real disease respectively. In this case, the root-cause of a virtual or real disease is the subsystem \( X \) itself and the symptoms the son or mother of the falling-ill subsystem \( X \) respectively. Abiding by TCE’s idea: “Searching for a root cause of disease in cure, treatment of both the root-cause and symptoms at the same time” (治病求本, 标本兼治), the works are first the prevention or the treatment for itself of a virtual or real disease respectively, the second are the prevention or the treatment for a more serious relation disease between virtual \( x \) and real \( k_x \) or between real \( s_x \) and virtual \( x \), respectively. Both the root-cause and the symptoms come from the second transfer law in Theorems 3.4 and 3.5.

Economic disease treatment should protect and maintain the balance or order of two incompatibility relations: the loving or liking relationship and the killing or liking relationship. The method for doing so can make the \( \rho_x = c \rho(x) \) tending to be large, i.e., all of both \( \rho(x) \) and \( c \) tend to be large, at least, greater than zero for an unhealthy economy; or, the best, equal to 1 for a healthy economy.

The following way can make the capabilities of both intervention reaction and self-protection become in the best state, the non-existence of side effects issue, the non-existence of medical and drug resistance problem, and so on.

(1) Suppose that \( a = 8.956\% < x < t_0 = 13.705\% \), as virtual-normal, in which \( x \) or \( s_x \) falls a virtual disease with a healthy economy. The mather \( s_x \) of the subsystem \( x \) is the root-cause of an expected virtual disease. And the subsystem \( x \) itself is the symptom of an expected virtual disease. Abiding by TCE’s idea: “Searching for a root cause of disease in cure, treatment of both the root-cause and symptoms at the same time” (治病求本, 标本兼治), it should be done to do in the following.

In order to protect or maintain the loving relationship, abiding by TCE’s idea “Virtual disease with a healthy economy is to fill itself” (虚则补之), increase the energy of \( x \) or \( s_x \) directly.

In order to protect or maintain the killing relationship, abiding by TCE’s idea “Don’t have disease cure cure non-ill” (不治已病治未病), do a preventive treatment for the more serious relation disease between virtual \( x \) and real \( k_x \).

Through the intervening principle of “Strong inhibition of the same time, support the weak” (抑强扶弱), increase the energy of the son \( s_x \) of \( x \) while decrease the energy of the prisoner \( k_x \) of \( s_x \).

(2) Suppose that \( a = 8.956\% < x < t_0 = 13.705\% \), as virtual-normal, in which \( x \) or \( s_x \) falls a virtual disease with a healthy economy. The mather \( s_x \) of the subsystem \( x \) is the root-cause of an expected virtual disease. And the subsystem \( x \) itself is the symptom of an expected virtual disease. Abiding by TCE’s idea: “Searching for a root cause of disease in cure, treatment of both the root-cause and symptoms at the same time” (治病求本, 标本兼治), it should be done to do in the following.

In order to protect or maintain the loving relationship, abiding by TCE’s idea “Virtual disease with a healthy economy is to fill its mother” (虚则补其母), increase the energy of the mother \( s_x \) of \( x \). The treating way is an indirect treating for \( x \).

In order to protect or maintain the killing relationship, abiding by TCE’s idea “Don’t have disease cure cure non-ill” (不治已病治未病), do a preventive treatment for the more serious relation disease between virtual \( x \) and real \( k_x \).

Through the intervening principle of “Strong inhibition of the same time, support the weak” (抑强扶弱), increase the energy of the son \( s_x \) of \( x \) while decrease the energy of the prisoner \( k_x \) of \( s_x \).

(3) Suppose that \( t_0 = 13.705\% < x < b = 20.079\% \), as real-normal, in which \( x \) or \( s_x \) falls a real disease with a healthy economy. The son \( s_x \) of the subsystem \( x \) is the root-cause of an expected real disease. And the subsystem \( x \) itself is the symptom of an expected real disease. Abiding by TCE’s idea: “Searching for a root cause of disease in cure, treatment of both the root-cause and symptoms at the same time” (治病求本, 标本兼治), it should be done to do in the following.

In order to protect or maintain the loving relationship, abiding by TCE’s idea “Real disease with a healthy economy is to rush down its son” (实则除其实), decrease the energy of the son \( s_x \) of \( x \). The treating way is an indirect treating for \( x \).

In order to protect or maintain the killing relationship, abiding by TCE’s idea “Don’t have disease cure cure non-ill” (不治已病治未病), do a preventive treatment for the more serious relation disease between real \( x \) and virtual \( k_x \).

Through the intervening principle of “Strong inhibition of the same time, support the weak” (抑强扶弱), decrease the
energy of \( x \) itself while increase the energy of the bane \( s_X \) of \( x \).

(4) Suppose that \( x > b = 20.079\% \), as real, in which \( x \) or \( s_X \) falls a real disease with an unhealthy economy. The subsystem \( X \) or \( s_X \) itself is the root-cause of a happened real disease. And the mother \( s_X \) of \( x \) is the symptoms of an expected or a happened real disease. Abiding by TCE’s idea: “Searching for a root cause of disease in cure, treatment of both the root-cause and symptoms at the same time” (治病求本, 标本兼治), it should be done to do in the following.

In order to protect or maintain the loving relationship, abiding by TCE’s idea “Real disease with an unhealthy economy is to rush down itself” (实则泄之), decrease the energy of \( x \) or \( s_X \) directly.

In order to protect or maintain the killing relationship, abiding by TCE’s idea “Don’t have disease cure cure non-ill” (不治已病治未病), do a preventive treatment for the more serious relation disease between real \( s_X \) and virtual \( v_X \).

Through the intervening principle of “Strong inhibition of the same time, support the weak” (抑强扶弱), decrease the energy of the mother \( s_X \) of \( x \) while increase the energy of the bane \( s_X \) of \( s_X \).

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APPENDIX

Proof of Property 3.1. See Figure 3., since the emperor prosperous place of Jia Yang wood of the ten heavenly stems is in Mao of the twelve earthly branches, so the rowing place is in Hai. It is because by Definition 3.3, counterclockwise to arrange, emperor as Mao, officer as Yin, crowned as Chou, bathing as Zi, rowing as Hai.

Similarly, the emperor prosperous place of Bing, Wu, Geng, Ren Yang fire, earth, metal,water of the ten heavenly stems is in Wu, Wu, You, Zi of the twelve earthly branches, so the rowing place is in Yin, Yin, Si Shen of the twelve earthly branches respectively.

See Figure 3. again, since the emperor prosperous place of Yi Yin wood of the ten heavenly stems is in Yin of the twelve earthly branches, so the rowing place is in Wu. It is because by Definition 3.3, clockwise to arrange, emperor as Yin, officer as Mao, crowned as Chen, bathing as Si, rowing as Wu.

Similarly, the emperor prosperous place of Ding, Ji, Xin, Gui Yin fire, earth, metal, water of the ten heavenly stems is in Si, Si, Chen, Hai of the twelve earthly branches, so the rowing place is in You, You, Zi, Mao of the twelve earthly branches respectively.

Therefore, the five Yin heavenly stems: Jia, Bing, Wu, Geng, Ren was born Hai, Yin, Yin, Si, Shen respectively; The five Yang heavenly stems: Yi, Ding, Ji, Xin, Gui was born Wu, You, You, Zi, Mao respectively. It completes the proof.

Proof of Property 3.2. By Definition 3.3 and Properties 3.3 and 3.4, there are

\[
\begin{align*}
&Zi(0, e) = \{ Gui(0,4) \}, \\
&Chou(0, (23)) = \{ Ji(0,2), Gui(0,4), Xin(0,3) \}, \\
&\Rightarrow Ji(0,2) * Gui(0,4) * Xin(0,3) = Gui(0,4), \\
&Gu(0,4)^{-1} = Gui(0,4) * Yi(0,0).
\end{align*}
\]

Therefore, the synthesized and synthesized or combined relationship between two elements

\[
\begin{align*}
&Zi(0, e) = \{ Gui(0,4) \} \\
&\text{and} \\
&Chou(0, (23)) = \{ Ji(0,0), Gui(0,4), Xin(0,3) \}
\]

is \( Yi(0,0) \) as \( \text{wood} (X) \) in Theorem 3.1.

Similarly, the synthesized and combined relationship between two elements

\[
\begin{align*}
&Yin(1, (132)) = \{ Jia(1,0),Bing(1,1),Wu(1,2) \} \\
&\text{and} \\
&Mao(1, (12)) = \{ Yi(0,0) \}
\]

is \( Geng(1,3) \) as \( \text{metal} (X) \) in Theorem 3.1 since

\[
\begin{align*}
&Yin(1, (132)) = \{ Jia(1,0),Bing(1,1),Wu(1,2) \}, \\
&Mao(1, (12)) = \{ Yi(0,0) \}, \\
&\Rightarrow Jia(1,0) * Bing(1,1) * Wu(1,2) = Geng(1,3), \\
&Yi(0,0) * Yi(1,0) * Geng(1,3) = Geng(1,3).
\end{align*}
\]

The synthesized and synthesized relationship between two elements

\[
\begin{align*}
&Chen(0, (12)) = \{ Yi(0,0), Wu(1,2), Gui(0,4) \} \\
&Si(0, (132)) = \{ Bing(1,1), Geng(1,3), Wu(1,2) \}
\]

and

\[
\begin{align*}
&Ding(0,1) * Ji(0,2) * Xin(0,3) = Xin(0,3), \\
&Ding(0,1) * Ji(0,2) * Xin(0,3) = Xin(0,3), \\
&Chen(0, (12)) = \{ Yi(0,0), Wu(1,2), Gui(0,4) \} \\
&Si(0, (132)) = \{ Bing(1,1), Geng(1,3), Wu(1,2) \}
\]

is \( Ji(0,2) \) as \( \text{earth} (X) \) in Theorem 3.1 since

\[
\begin{align*}
&Chen(0, (12)) = \{ Yi(0,0), Wu(1,2), Gui(0,4) \} \\
&Si(0, (132)) = \{ Bing(1,1), Geng(1,3), Wu(1,2) \}, \\
&\Rightarrow Yi(0,0) * Wu(1,2) * Gui(0,4) = Bing(1,1), \\
&Bing(1,1) * Geng(1,3) * Wu(1,2) = Bing(1,1), \\
&Bing(1,1) * Geng(1,3) = Ji(0,2).
\end{align*}
\]

The synthesized and synthesized relationship between two elements

\[
\begin{align*}
&Wu(1, (123)) = \{ Ding(0,1), Ji(0,2) \} \\
&Wei(1, (13)) = \{ Ding(0,1), Ji(0,2), Yi(0,0) \}, \\
&\Rightarrow Ding(0,1) * Ji(0,2) = Xin(0,3), \\
&Ding(0,1) * Ji(0,2) * Yi(0,0) = Xin(0,3), \\
&Xin(0,3) * Xin(0,3) = Ding(0,1).
\end{align*}
\]

The synthesized relationship between the comprehensive energy of two elements

\[
\begin{align*}
&Shen(0, (13)) = \{ Geng(1,3), Ren(1,4), Wu(1,2) \} \\
&You(0, (123)) = \{ Xin(0,3) \}
\]

is \( Ren(1,4) \) as \( \text{water} (X) \) in Theorem 3.1 since

\[
\begin{align*}
&Shen(0, (13)) = \{ Geng(1,3), Ren(1,4), Wu(1,2) \}, \\
&You(0, (123)) = \{ Xin(0,3) \}, \\
&\Rightarrow Geng(1,3) * Ren(1,4) * Wu(1,2) = Ren(1,4), \\
&Xin(0,3) * Wu(1,2) = Ren(1,4).
\end{align*}
\]

The synthesized relationship between two elements

\[
\begin{align*}
&Shen(0, (13)) = \{ Geng(1,3), Ren(1,4), Wu(1,2) \}, \\
&You(0, (123)) = \{ Xin(0,3) \}
\]

is \( Ren(1,4) \) as \( \text{water} (X) \) in Theorem 3.1 since

\[
\begin{align*}
&Shen(0, (13)) = \{ Geng(1,3), Ren(1,4), Wu(1,2) \}, \\
&You(0, (123)) = \{ Xin(0,3) \}, \\
&\Rightarrow Geng(1,3) * Ren(1,4) * Wu(1,2) = Ren(1,4), \\
&Xin(0,3) * Wu(1,2) = Ren(1,4).
\end{align*}
\]

The synthesized relationship between two elements

\[
\begin{align*}
&Shen(0, (13)) = \{ Geng(1,3), Ren(1,4), Wu(1,2) \}, \\
&You(0, (123)) = \{ Xin(0,3) \}
\]

is \( Ren(1,4) \) as \( \text{water} (X) \) in Theorem 3.1 since

\[
\begin{align*}
&Shen(0, (13)) = \{ Geng(1,3), Ren(1,4), Wu(1,2) \}, \\
&You(0, (123)) = \{ Xin(0,3) \}, \\
&\Rightarrow Geng(1,3) * Ren(1,4) * Wu(1,2) = Ren(1,4), \\
&Xin(0,3) * Wu(1,2) = Ren(1,4).
\end{align*}
\]
Xu(1, (23)) = ((0, 0), (0, 3), Wu(1, 2), Ding(0, 1)),
Hai(1, ) = (Ren(1, 4), Ita(1, 0)),
⇒ Xu(0, 3) * Wu(1, 2) * Ding(0, 1) = Bing(1, 1),
Ren(1, 4) * Ita(1, 0) * Xu(0, 3) * Wu(1, 2) = Bing(1, 1).

Therefore, the following notations in Definition 3.2 are as follows:

$$X^+ X^* X^* K^* S^+ S^* X^*/ (0, e) \quad (1, e) \quad (0, 12) \quad (1, 12) \quad (0, 13) \quad (1, 13)$$ It

$$X^+ X^* X^* K^* S^+ S^* X^*/ (0, 23) \quad (1, 23) \quad (0, 132) \quad (1, 132) \quad (0, 123) \quad (1, 123).$$

is with the correct meaning of the Yin Yang Wu Xing Model in Theorem 3.1. #

Proof of Property 3.3. Consider the Zangxiang system or the ten Heavenly Stems model

$$V^2 \times V^* = \{ (i, j) \mid i \in V^2, j \in V^* \}.$$ Its all relations are as follows:

$$R(2,5) = \{ ((0, 0), (0, 0)), ((1, 0), (1, 0)), ((0, 1), (1, 1)), ((0, 2), (0, 2)), ((1, 2), (1, 2)), ((0, 3), (0, 3)), ((1, 3), (1, 3)), ((0, 4), (0, 4)), ((1, 4), (1, 4)), ((0, 1), (1, 0)), ((0, 2), (0, 2)), ((0, 3), (0, 3)), ((1, 3), (1, 3)), ((0, 4), (0, 4)), ((1, 4), (1, 4)) \},$$

$$R(0,1) = \{ ((0, 0), (0, 0)), ((1, 0), (1, 0)), ((0, 1), (1, 1)), ((0, 2), (0, 2)), ((1, 2), (1, 2)), ((0, 3), (0, 3)), ((1, 3), (1, 3)), ((0, 4), (0, 4)), ((1, 4), (1, 4)) \},$$

$$R(2,5) = \{ ((0, 0), (0, 1)), ((0, 1), (0, 0)), ((1, 0), (1, 0)), ((1, 1), (1, 1)), ((1, 2), (1, 2)), ((1, 3), (1, 3)), ((1, 4), (1, 4)) \},$$

$$R(0,1) = \{ ((0, 0), (0, 1)), ((0, 1), (0, 0)), ((1, 0), (1, 0)), ((1, 1), (1, 1)), ((1, 2), (1, 2)), ((1, 3), (1, 3)), ((1, 4), (1, 4)) \},$$

$$R(2,5) = \{ ((0, 0), (0, 2)), ((0, 2), (0, 0)), ((1, 0), (1, 0)), ((1, 2), (1, 2)), ((1, 3), (1, 3)), ((1, 4), (1, 4)) \},$$

$$R(0,1) = \{ ((0, 0), (0, 2)), ((0, 2), (0, 0)), ((1, 0), (1, 0)), ((1, 2), (1, 2)), ((1, 3), (1, 3)), ((1, 4), (1, 4)) \},$$

$$R(2,5) = \{ ((0, 0), (0, 3)), ((0, 3), (0, 0)), ((1, 0), (1, 0)), ((1, 1), (1, 1)), ((1, 2), (1, 2)), ((1, 3), (1, 3)), ((1, 4), (1, 4)) \},$$

$$R(0,1) = \{ ((0, 0), (0, 3)), ((0, 3), (0, 0)), ((1, 0), (1, 0)), ((1, 1), (1, 1)), ((1, 2), (1, 2)), ((1, 3), (1, 3)), ((1, 4), (1, 4)) \},$$

$$R(2,5) = \{ ((0, 0), (1, 0)), ((0, 1), (1, 0)), ((0, 2), (1, 0)), ((0, 3), (1, 0)), ((0, 4), (1, 0)), ((1, 0), (0, 0)), ((1, 1), (0, 0)), ((1, 2), (0, 0)), ((1, 3), (0, 0)), ((1, 4), (0, 0)) \},$$

$$R(0,1) = \{ ((0, 0), (1, 0)), ((0, 1), (1, 0)), ((0, 2), (1, 0)), ((0, 3), (1, 0)), ((0, 4), (1, 0)), ((1, 0), (0, 0)), ((1, 1), (0, 0)), ((1, 2), (0, 0)), ((1, 3), (0, 0)), ((1, 4), (0, 0)) \},$$

$$R(2,5) = \{ ((0, 0), (1, 0)), ((0, 1), (1, 0)), ((0, 2), (1, 0)), ((0, 3), (1, 0)), ((0, 4), (1, 0)), ((1, 0), (0, 0)), ((1, 1), (0, 0)), ((1, 2), (0, 0)), ((1, 3), (0, 0)), ((1, 4), (0, 0)) \},$$

$$R(0,1) = \{ ((0, 0), (1, 0)), ((0, 1), (1, 0)), ((0, 2), (1, 0)), ((0, 3), (1, 0)), ((0, 4), (1, 0)), ((1, 0), (0, 0)), ((1, 1), (0, 0)), ((1, 2), (0, 0)), ((1, 3), (0, 0)), ((1, 4), (0, 0)) \},$$

$$R(2,5) = \{ ((0, 0), (1, 0)), ((0, 1), (1, 0)), ((0, 2), (1, 0)), ((0, 3), (1, 0)), ((0, 4), (1, 0)), ((1, 0), (0, 0)), ((1, 1), (0, 0)), ((1, 2), (0, 0)), ((1, 3), (0, 0)), ((1, 4), (0, 0)) \}.$$

$$R(0,1) = \{ ((0, 0), (1, 0)), ((0, 1), (1, 0)), ((0, 2), (1, 0)), ((0, 3), (1, 0)), ((0, 4), (1, 0)), ((1, 0), (0, 0)), ((1, 1), (0, 0)), ((1, 2), (0, 0)), ((1, 3), (0, 0)), ((1, 4), (0, 0)) \}.$$
Proof of Theorem 3.3. See Figure 3., in the Jingluo system or the twelve Earthly Branches model for a healthy economy, only both the liking relation and the adjacent relation have the transfer law of the Yang or Yin vital or righteousness energies.

By Definition 3.3, the elements of the twelve earthly branches have properties: Zi as the Yang water, Chou as the Yin earth, Yin as the Yang wood, Mao as the Yin wood, Chen as the Yang earth, Si as the Yin fire, Wu as the Yang fire, Wei as the Yin metal, You as the Yin metal, XU as the Yang earth, Hai as the Yang water. Here, earth element exists everywhere, so the energy transport order is mainly composed of wood, fire, metal and water elements.

About wood, fire, metal and water element to determine a natural transmission law of wood to fire, to metal by soil, then reach the water. That is to say: a natural Yin energy transmission rule is as follows:

- Yang wood Yin ← Yin wood Mao
- Yang earth Chen ← Yin fire Si
- Yang fire Wu ← Yin earth Wei
- Yang metal Shen ← Yin metal You
- Yang earth XU ← Yin water Hai
- Yang water Zi ← Yin earth Chou.

Its main content is still follow the intergeneration transmission sequence of Yin Yang Wu Xing.

By Property 3.4, the following relation cost (0,(23))

(\(X^\prime (0,e), X^\prime (0,23)\)), \(X^\prime (0,1), X^\prime (1,1), X^\prime (0,2), X^\prime (1,2), X^\prime (0,3), X^\prime (1,3)\),

\((S^\prime (0,4), S^\prime (1,4))\) \(\in\) \(R^{(2,5)}\).

Proof of Theorem 3.2. See Figure 2., in the Zangxiang system or the ten Heavenly Stems model for a healthy economy, only both the liking relation and the loving relation have the transfer law of the Yang or Yin vital or righteousness energies. By Theorem 3.2 of [Zhang 23], Yang is transferring along the order of the loving relationship. Yin is transferring against the order of the loving relationship.

By Property 3.3, the following relation cost (0,(23)) is low.

- \(X^\prime (1,0), X^\prime (0,0), X^\prime (1,1), X^\prime (0,2), X^\prime (1,2), X^\prime (0,3), X^\prime (1,3), X^\prime (0,4), X^\prime (1,4)\),

- \(S^\prime (0,4), S^\prime (1,4)\) \(\in\) \(R^{(2,5)}\).

It is because the element (1,0) of the ten Heavenly Stems is a Tao force, which is a low cost if the Yin Yang Wu Xing model \(V^\prime\) is implemented by the Tao force of the Tao model \(V^\prime\).

Their relations are called the liking relation.

Because the liking relationship cannot change the transfer law of the order of the loving relation, so, by Theorem 3.2 in Zhang [23], Yang is transferring along the order of the ten heavenly stems. Yin is transferring against the order of the ten heavenly stems. It completes the proof.

Proof of Theorem 3.3. See Figure 3., in the Jingluo system or the twelve Earthly Branches model for a healthy economy, only both the liking relation and the adjacent relation have the transfer law of the Yang or Yin vital or righteousness energies.

By Definition 3.3, the elements of the twelve earthly branches have properties: Zi as the Yang water, Chou as the Yin earth, Yin as the Yang wood, Mao as the Yin wood, Chen as the Yang earth, Si as the Yin fire, Wu as the Yang fire, Wei as the Yin metal, You as the Yin metal, XU as the Yang earth, Hai as the Yang water. Here, earth element exists everywhere, so the energy transport order is mainly composed of wood, fire, metal and water elements.

About wood, fire, metal and water element to determine a
natural transmission law of wood to fire, to metal by soil, then reach the water. That is to say: a natural Yin energy transmission rule is as follows:

- Yang wood Yin ← Yin wood Mao
- Yang earth Chen ← Yin fire Si
- Yang fire Wu ← Yin earth Wei
- Yang metal Shen ← Yin metal You
- Yang earth XU ← Yin water Hai
- Yang water Zi ← Yin earth Chou.

Its main content is still follow the intergeneration transmission sequence of Yin Yang Wu Xing.

By Property 3.4, the following relation cost (0,(23))

(\(X^\prime (0,e), X^\prime (0,23)\)), \(X^\prime (1,0), X^\prime (1,1), X^\prime (1,2), X^\prime (1,3), X^\prime (0,3), X^\prime (1,4), X^\prime (0,4)\),

\(S^\prime (1,4), S^\prime (0,4)\) \(\in\) \(R^{(2,5)}\).

It is because the element (0,(23)) of the twelve Earthly Branches is an essential substance circulating in the channels and blood vessels (\(\frac{1}{2} \text{ qi} \)). It is a low cost element if economy “eats”. Their relations are called the liking relation for a healthy economy, denoted by \(\leftrightarrow\).

Because the liking relationship cannot change the transfer law of the order of the loving relation, so, the above elements replacing transmission rule of the twelve earthly branches element, get the transmission law of the twelve earthly branches:

- real Yin \(K_X^-\) ← real Mao \(K_X^+\)
- real Chen \(X_K^-\) ← real Si \(X_K^+\)
- virtual Wu \(X_S^-\) ← virtual Wei \(X_S^+\)
- virtual Shen \(X_S^-\) ← virtual You \(X_S^+\)
- virtual XU \(X_S^-\) ← virtual Hai \(X_S^+\)
- virtual Zi \(X_S^-\) ← virtual Chou \(X_S^+\).

The relationship
Their relations are called the liking relation.

By Property 3.3, the following relation cost (1,0) is low.

Thus, the transfer law of the Yang vital or righteousness energies of the twelve earthly branches is transferring against the order of the loving or liking relationship.

Because the liking relationship cannot change the transfer law of the order of the loving relationship of the ten heavenly stems.

By Property 3.4, the following relation cost (0,23) is low.

It is because the element (1,0) of the ten Heavenly Stems is a Tao force, which is a low cost if the Yin Yang Wu Xing model $V'$ is implemented by the Tao force of the Tao model $V$. Their relations are called the liking relation.

Because the liking relationship cannot change the transfer law of the order of the killing relationship, so, by Theorem 3.3 in Zhang [23], Yang is transferring along the order of the killing or liking relation of the ten heavenly stems. Yin is transferring along the order of the killing or liking relation of the ten heavenly stems. It completes the proof. #

Proof of Theorem 3.4. See Figure 2., in the Zangxiang system or the ten Heavenly Stems model for an unhealthy economy, only both the liking relation and the killing relation have the transfer law of the Yang or Yin vital or righteousness energies. By Property 3.3 of Zhang [23], Yang is transferring against the order of the killing relationship. Yin is transferring along the order of the killing relationship.

Because the liking relationship cannot change the transfer law of the order of the liking relationship.

Therefore, the transfer law of the Yang or Yin vital or righteousness energies of the twelve earthly branches is obtained as follows: Yang is transferring along the liking or loving order of the twelve earthly branches. And Yin is transferring against the liking or loving order of the twelve earthly branches. It completes the proof. #

Proof of Theorem 3.5. See Figure 3., in the Jingluo system or the twelve Earthly Branches model for an unhealthy economy, only both the liking relation and the alternate relation have the transfer law of the Yang or Yin vital or righteousness energies.

By Property 3.4, the following relation cost (0,23) is low.

It is because the element (0,23) of the twelve Earthly Branches is an essential substance circulating in the channels.
and blood vessels (肺气). It is a low cost element if the economic society “eats”. Their relations are called the liking relation for a healthy economy, denoted by $\leftrightarrow$.

By Theorem 3.3 in Zhang [23], Yang is transferring against the order of the killing relationship. Yin is transferring along the order of the killing relationship. So, the transfer law of the Yin vital or righteousness energies of the twelve earthly branches is transferring along the order of the killing or liking relationship. It is because the liking relationship cannot change the transfer law of the order of the killing or liking relation.

In mathematics, by Theorem 3.3 in Zhang [23], for the unhealthy economy, the transfer law of the Yin vital energies of the twelve earthly branches is as follows:

$$\begin{align*}
K'_Y(1,(12)) &\Rightarrow X'_Y(0,(0,e)) \Rightarrow X'_Y(0,(12)) \Rightarrow \\
&\Rightarrow Yin \quad Chou \quad Si \\
K'_X(1,(132)) &\Rightarrow X'_X(0,(23)) \Rightarrow X'_X(0,(132)) \\
&\Rightarrow Shen \quad Wei \quad Hai \\
S'_X(0,(133)) &\Rightarrow X'_X(1,(133)) \Rightarrow X'_X(1,(e)) \\
&\Rightarrow You \quad Wu \quad Xu \\
S'_X(0,(123)) &\Rightarrow X'_X(1,(123)) \Rightarrow X'_X(1,(23)) \\
\end{align*}$$

It is because the order $$K'_X \Rightarrow X \Rightarrow X'_X \Rightarrow S'_X \Rightarrow X'_S \Rightarrow$$ is transferring along the killing order of the twelve earthly branches.

Similarly, Yang is transferring against the order of the killing or liking relationship. So, the transfer law of the Yang vital or righteousness energies of the twelve earthly branches is transferring against the order of the killing or liking relationship. It is because the liking relationship cannot change the transfer law of the order of the killing or liking relation.

In mathematics, by Theorem 3.3 in Zhang [23], for the unhealthy economy, the transfer law of the Yang vital energies of the twelve earthly branches is as follows:

$$\begin{align*}
K'_Y(1,(12)) &\iff X'_Y(1,(e)) \iff X'_Y(1,(13)) \iff \\
&\iff Yin \quad Xu \quad Wu \\
K'_X(1,(132)) &\iff X'_X(1,(23)) \iff X'_X(1,(123)) \\
&\iff Shen \quad Chen \quad Zhi \\
S'_X(0,(133)) &\iff X'_X(0,(123)) \iff X'_X(0,(e)) \\
&\iff You \quad Si \quad Chou \\
S'_X(0,(123)) &\iff X'_X(0,(132)) \iff X'(0,(23)) \\
\end{align*}$$

It is because the order $$K'_X \iff X'_X \iff X'_S \iff X'_E \iff$$ is transferring against the killing order of the twelve earthly branches. It completes the proof.

**Proof of Theorem 4.1.** Let $$a = 2.9515\%, b = 6.1002\%, t_0 = 4.2539\%.$$ 

(1) By the (1) of Theorem 4.1 in Zhang [23], $x$ and $x'_4$ as continuous subsystems of occurring disease, it only need to be proved that the subsystem $x$ itself is the root-cause of a virtual disease and that the son subsystem $x'_4$ of $X$ is the symptoms of disease at this time.

In this case, the economy is unhealthy. The first physiological system is running hardly. The loving relationship is running hardly. Only the killing relationship runs normally. By Theorems 3.2 and 3.3, the first transfer law of economy energies is not to work. By Theorems 3.4 and 3.5, the second transfer law of economy energies is beginning to work.

By the theory of Zangxiang and Jingluo in Definition 3.1 and 3.2, the virtual disease of the subsystem $X$ is transferring from the virtual disease of its son $X'_4$ for a good self-protection ability. Consider whether the subsystem $X$ virtual disease, the cause of its root-cause will be able to direct the subsystem $X$ treatment. In the following, consider the result of the subsystem $X$ direct intervention. From Theorem 3.2 and Corollary 3.2 in [20], the subsystem $X$ was considered as virtual. When the capability of self-protection is nearly to the best state, i.e., $\rho_3 = c \rho(x)$ where $c \rightarrow 1$, if you increase the energy of the subsystem $X$ directly, then its capabilities of both intervention reaction and self-protection can make the subsystems $X'_4 \cdot K_X$ and $X'_k$ restored at the same time, but the subsystems $X$ and $X'_4$ will increase their energies, i.e., changed by the increments

$$\begin{align*}
\Delta \phi(x)_2 &\rightarrow (1 - \phi(x)) \Delta > 0, \\
\Delta \phi(x')_2 &\rightarrow (\phi(x) + \phi(x)^3) \Delta > 0,
\end{align*}$$

respectively. Since the GBR inflation rate $x < a$ makes $0 \leq \rho_4 = \rho(x) < \rho_1$ such that $(\phi(x) + \phi(x)^3) < (1 - \phi(x))$, therefore the subsystem $x$ can obtain the large increment

$$\Delta \phi(x)_2 = (1 - \phi(x)^3) \Delta > 0$$

and the subsystem $X'_4$ will get the small increment

$$\Delta \phi(x')_2 = (\phi(x) + \phi(x)^3) \Delta > 0.$$ The later is the pseudo side effects issue, by Attaining Rule in Zhang [23], which is just the food of the second physiological system of the steady multilateral system since that the economy is unhealthy, virtual and $x$ intervened makes that the second physiological system will attain the Chi or energy (Yang energy) from the son $X'_4$ of the intervened subsystem $x$. The attaining way is an indirect treating for $x$ as an unhealthy economy with a virtual disease. That means that the intervened subsystem $x$ direct treatment effect is in accordance with the working principle of system and meridian system. So say: the subsystem $x$ deficiency disease is why disease at this time. Thus, the subsystem $x$ itself is the root-cause of a virtual disease. Of course, the son subsystem $x'_4$ of $x$ is the symptoms of disease at this time. Need to use the method of the intervening principle of “Strong inhibition of the same time, support the weak” (肺肝扶弱) action to treat.

(2) By the (2) of Theorem 4.1 in Zhang [23], $x$ and $x'_4$ as continuous subsystems of occurring disease, it only need to be proved that the mother $S'_X$ of subsystem $x$ is the root-cause of a virtual disease and the subsystem $x'_4$ itself is the symptoms of a virtual disease at this time.

In this case, the economy is healthy. The first physiological system is running normally. The loving relationship is running normally. The liking relationship is also running normally. By Theorems 3.2 and 3.3, the first transfer law of economy
energies is doing to work. By Theorems 3.4 and 3.5, the second transfer law of economy energies is not to work. By the theory of Zangxiang and Jingluo in Definition 3.1 and 3.2, the virtual disease of the subsystem $X$ is transferring from the virtual disease of its mother $S_X$ for a good self-protection ability. Consider whether the mother $S_X$ of the subsystem $X$ virtual disease, the cause of its root-cause will be able to direct the mother $S_X$ of the subsystem $X$ treatment. In the following, consider the result of the mother $S_X$ of the subsystem $X$ treatment direct intervention. From Theorem 3.2 and Corollary 3.2 in [20], the subsystem $X$ will be considered as virtual. First the case is studied that the capability of self-protection is in the best state, i.e., $\rho_3 = c \rho(x) \rightarrow \rho(x) = \rho_3 > 0$ where $c \rightarrow 1$. If the energy of the subsystem $S_X$ is intervened to decrease its energy, then its capabilities of intervention reaction and self-protection can make the subsystems $K_x$, $X_k$ and $S_X$ restored at the same time, but the subsystems $S_X$ and $X$ will increase their energies, i.e., changed by the increments

$$\Delta \phi(S_X) \rightarrow (1 - \rho(x)^3) \Delta > 0,$$

$$\Delta \phi(X) \rightarrow (\rho(x) + \rho(x)^3) \Delta > 0,$$

respectively. Since the GBR inflation rate $a \leq x \leq l_0$ makes $1 \geq \rho_1 = \rho(x) \geq \rho_0$ such that mainly $\rho(x) + \rho(x)^3 \geq (1 - \rho(x)^3)$, therefore the subsystem $X$ can obtain the large increment $\Delta \phi(S_X) \rightarrow (1 - \rho(x)^3) \Delta > 0$ and the subsystem $S_X$ will get the small increment $\Delta \phi(S_X) \rightarrow (1 - \rho(x)^3) \Delta$. The later is the pseudo side effects issue, by Attaining Rule in Zhang [23], which is just the food of the second physiological system of the steady multilateral system since that the economy is healthy, virtual and $S_X$ intervened makes that the second physiological system will attain the Chi or energy from the intervened subsystem $S_X$ directly for a healthy with a virtual disease. That means for the intervened subsystem $S_X$ direct treatment effect is in accordance with the working principle of system and meridian system. So say: the subsystem $S_X$ deficiency disease is why disease at this time. Thus, the mother subsystem $S_X$ of $X$ is the root-cause of a virtual disease. Of course, the subsystem $X$ itself is the symptoms of a virtual disease at this time. Need to use the method of the intervening principle of “Strong inhibition of the same time, support the weak” (抑强扶弱) action to treat.

(3) By the (3) of Theorem 4.1 in Zhang [23], $X$ and $S_X$ as continuous subsystems of occurring disease, it only need to be proved that the son $X_s$ of $X$ the root-cause of a real disease and the subsystem $X$ itself is the symptoms of a real disease at this time.

In this case, the economy is healthy. The first physiological system is running normally. The loving relationship is running normally. The liking relationship is also running normally. By Theorems 3.2 and 3.3, the first transfer law of economy energies is doing to work. By Theorems 3.4 and 3.5, the second transfer law of economy energies is not to work. By the theory of Zangxiang and Jingluo in Definitions 3.1 and 3.2, the virtual disease of the subsystem $X$ is transferring from the virtual disease of its son $S_X$ for a good self-protection ability. Consider whether the son $S_X$ of the subsystem $X$ virtual disease, the cause of its root-cause will be able to direct the son $X_s$ of the subsystem $X$ treatment. In the following, consider the result of the son $S_X$ of the subsystem $X$ treatment direct intervention. From Theorem 3.2 and Corollary 3.2 in [20], the subsystem $X$ will be considered as real. First the case is studied that the capability of self-protection is in the best state, i.e., $\rho_3 = c \rho(x) \rightarrow \rho(x) = \rho_3$ where $c \rightarrow 1$. If the energy of the subsystem $S_X$ is intervened to decrease its energy, then its capabilities of intervention reaction and self-protection can make the subsystems $X_s$, $S_X$ and $S_X$ restored at the same time, but the subsystems $S_X$ and $X$ will decrease their energies, i.e., changed by the increment $\Delta \phi(S_X) \rightarrow -(1 - \rho(x)^3) \Delta > 0$, respectively. Since the GBR inflation rate $t_0 < x \leq b$ makes $1 > \rho_1 = \rho(x) > \rho_0$ such that mainly $(\rho(x) + \rho(x)^3) > (1 - \rho(x)^3)$, therefore the subsystem $X_s$ can obtain the small slightly reduction $\Delta \phi(S_X) \rightarrow -(1 - \rho(x)^3) \Delta < 0$. However, the subsystem $X_s$ will get a modest reduction $\Delta \phi(S_X) \rightarrow -(1 - \rho(x)^3) \Delta < 0$. The later is the pseudo side effects issue, by Attaining Rule in Zhang [23], which is just the food of the second physiological system of the steady multilateral system since that the economy is healthy, real and $S_X$ intervened makes that the second physiological system will attain the Chi or energy from the intervened subsystem $S_X$ directly for a healthy with a real disease. That means for the intervened subsystem $S_X$ direct treatment effect is in accordance with the working principle of system and meridian system. So say: the subsystem $S_X$ real disease is why disease at this time. Thus, the son subsystem $X_s$ of $X$ is the root-cause of a real disease. Of course, the subsystem $X$ itself is the symptoms of a real disease at this time. Need to use the method of the intervening principle of “Strong inhibition of the same time, support the weak” (抑强扶弱) action to treat.

(4) By the (4) of Theorem 4.1 in Zhang [23], $X$ and $X_s$ as continuous subsystems of occurring disease, it only need to be proved that the subsystem $X$ itself is the root-cause of a real disease and that the mother $S_X$ of $X$ is the symptoms of a real disease at this time.

In this case, the economy is unhealthy. The first physiological system is running hardly. The loving relationship is running hardly. Only the killing relationship is running normally. By Theorems 3.2 and 3.3, the first transfer law of economy energies is not to work. By Theorems 3.4 and 3.5, the second transfer law of economy energies is beginning to work.
By the theory of Zangxiang and Jingluo in Definitions 3.1 and 3.2, the virtual disease of the subsystem \( \chi \) is transferring from the real disease of its mother \( \delta \) for a good self-protection ability. Consider whether the subsystem \( \chi \) virtual disease, the cause of its root-cause will be able to direct the subsystem \( \chi \) treatment. In the following, consider the result of the subsystem \( \chi \) treatment direct intervention.

From Theorems 3.2 and Corollary 3.2 in [20], the subsystem \( X \) was considered as real. When the capability of self-protection is in the best state, i.e., \( \rho_1 = c \rho(x) \rightarrow \rho(x) = \rho_1 \) where \( c \rightarrow 1 \), if the energy of the subsystem \( X \) is intervened to decrease its energy directly, then its capabilities of intervention reaction and self-protection can make the subsystems \( x_k, K_x \) and \( x_\delta \) restored at the same time, but the subsystems \( x \) and \( \delta \) will decrease their energies, i.e., changed by the increments

\[
\Delta \varphi(X) x_\delta \rightarrow -(1-\rho(x)^3) \Delta \varphi < 0,
\]

\[
\Delta \varphi(SX) x_\delta \rightarrow -(\rho(x)+\rho(x)^3) \Delta \varphi < 0,
\]

respectively.

Since the GBR inflation rate \( h > b \) makes

\[
0 \leq \rho_3 = \rho(x) < \rho_0
\]

such that \( (\rho(x)+\rho(x)^3)(1-\rho(x)^3) \) , therefore the subsystem \( \chi \) can obtain the substantial reduction

\[
\Delta \rho(x) (x) = -(1-\rho(x)^3) \Delta \rho < 0
\]

and the subsystem \( \delta \) will get a modest reduction

\[
\Delta \rho(Sx) = -(\rho(x)+\rho(x)^3) \Delta \rho < 0.
\]

The later is the pseudo side effects, by Attaining Rule in Zhang [23], which is just the food of the second physiological system of the steady multilateral system since that the economy is unhealthy, real and \( \delta \) intervened makes that the second physiological system will attain the Chi or energy from the mother \( \delta \) of the intervened subsystem \( \chi \). The attaining way is an indirect treating for \( \chi \) as an unhealthy economy with a real disease. That means for the intervened subsystem \( \chi \) direct treatment effect is in accordance with the working principle of system and meridian system. So say: the subsystem \( \chi \) real disease is why disease at this time. Thus the subsystem \( \chi \) is the root-cause of a real disease. Of course, the mother \( \delta \) of \( \chi \) is the symptoms of a real disease at this time. Need to use the method of the intervening principle of “Strong inhibition of the same time, support the weak” (抑强扶弱) action to treat. It completes the proof.#

REFERENCES

Table 1. Ten Heavenly stems

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Table 3. Inflation Rates of Finance, GDP, CPI, PPI, RPI, GBR and AAF

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Assume that μ1 or μ2 is issued in the circulating of the annual budget, the Gross Domestic Product (GDP) as G or G', the consumer price index (CPI) as C or C', the Producer Price Index (PPI) as P or P', the Retail Price Index (RPI) as R or R', the General Budget Revenue (GBR) as μ or μ', and the total output value of Agriculture, forestry and fishing (AAF) as μ or μ', for today and yesterday respectively, the actual need of money in real terms in the circulation F = μ1 + μ2 G + G'. The inflation rate of CPI is μ1 = μ2 G1 / G2, the inflation rate of PPI is μ1 = μ2 P1 / P2, the inflation rate of RPI is μ1 = μ2 R1 / R2, the inflation rate of GBR is μ1 = μ2 GBR1 / GBR2, the inflation rate of AAF is μ1 = μ2 AAF1 / AAF2, respectively, and the annual Finance inflation rate can be measured by μ1 / μ2.