



# The **shaping** of our bodies

Influences in the formation of flesh and skin

By **Peter Torsell**

*In all their settlements, the bodily capacities of the people are sure to be according to the heaven and earthly influences, as cold or hot, dry or moist.*

– Li Ji (Book of Rites)<sup>1</sup>

From the treasurehouse of Chinese medicine and classical books we find universal ideas about how we are shaped as humans, and how to use insights about food regulation and other daily habits to maintain our balance in the face of constant change. In Chinese thinking there is an obvious interconnectedness between man and his surroundings, and this article will focus on how this connection defines and shapes the body. Thanks to Chinese correlative cosmology, we understand that the body and skin manifest a constitutional tendency, but not a static one. We live in our bodies, whether they are healthy or sick. Chinese medicine theory, its terms such as qi, yin and yang, and its categorisation of signs and symptoms, gives us tools to stay healthy and to shape those bodies in the way we wish. These tools allow us to choose the proper food, drink and activity to achieve our goals. Two organ systems are key to shaping the body: the Spleen and Lungs.

The Spleen builds form

*Spleen qi exuberance means a superabundance of the physical body.*<sup>2</sup>

Earth is the basis of form. Spleen and Stomach create physical form by transforming food and drink into flesh. As stated in classical texts and confirmed in practice, the form of your body reflects the condition of one's Spleen. *Su Wen* (Basic Questions) chapter 44 "The treatise on wilting" offers this: "Spleen qi heat causes dryness of the stomach and thirst, numbness of the flesh and flesh wilting."<sup>3</sup>

Li Dongyuan wrote in the *Pi Wei Lun* (Treatise on the Spleen and Stomach) that: "When the Spleen and Stomach qi is empty, it causes inability to eat and emaciation, or reduced eating and obesity."<sup>4</sup>

Sun Simiao discussed the flavours (*wei*) as a metaphor for nourishment and its effect: "The physical form (*xing*) receives the flavours in order to achieve completion. If the flavours of foods are not harmonised, the physical form will be spoiled. This is the reason why the sage first employs nutritional interdictions (*shi jin*) in order to preserve his nature."<sup>a</sup>

a. Sun Simiao (581-682) legendary scholar of medicine portrayed as god of medicine. The quote

In addition to the influence of the Spleen on the form of the body, there are also constitutional influences. As Ye Tianshi observed: “When patients present with a sombre red skin colour and emaciation with solid flesh, their constitutional body is yang.”<sup>5</sup> I view the constitution as not just the inherited body but also the influence of the environment in which people live, another aspect of heaven and earth.

### Correlation is not causation

Just because two things occur together does not mean that one caused the other; correlation does not mean causation. Medical science with its causal analytic paradigm discounts correlation, but correlative thinking has its uses. The body, the earth, water, climate, geography, food, desires and psychological character all correlate, and so Chinese medicine sets cause and effect in a different light. The way the body is affected by food is a concrete example of how this type of thinking can apply.

While the Spleen builds form, this is not just cause-and-effect moving in a single direction, as the body also influences the Spleen. Because the Spleen and the body influence one another, this renders the efforts of Western reductive science and causal analytical thinking to establish one defined effect from one defined cause rather complicated to achieve. For example, foods can have different effects depending on the situation. One man who was obese could not eat rice because it gave him reflux, but after he lost weight, exercised into a fit state and generally felt better, he could eat rice without problem. A young, alert, thinly built girl suffered from headaches, and her mother reported that she had recently developed smelly armpits. I recommended that she eat more carrots and potatoes and within a week the smell had disappeared. It is not that carrots and potatoes are specifically indicated for resolving smelly armpits but in certain circumstances they could have this effect. If controlled studies were done on whether rice causes reflux, or potatoes cure

smelly armpits, they would almost certainly find no evidence for such effects. But when we approach the aetiology of reflux and body smells in a different way—a correlative way—it is not unreasonable to consider such effects. These two patients have differently structured bodies, providing differing circumstances for the interaction of those foods with their Spleens. Chinese medical concepts and terminology are a useful way to appreciate the correlations between patients, their bodies and the food they eat.

### The body as blood and fluids

Zhu Danxi wrote: “A fat person is abundant in dampness, while a thin person is abundant in fire.”<sup>6</sup> In the correlative frame of Chinese medicine, humans are microcosmic mirrors of heaven and earth. The body is associated with earth while the mind is associated with heaven. In other terms, the body is water and the mind is fire. “Earth is the anchor for heaven” is equivalent to saying “the body is the anchor for the mind (*shen*)” and is also equivalent to saying “water is the anchor of fire”.

It’s important to remember that not only are members of a pair correlating with each other, but that in correlative thinking the opposite member in a pair can switch places with another opposite—so considering earth-heaven and water-fire, earth can control fire and not be regarded only as in opposition to heaven. With the pairs movement-stillness and heat-cold, movement could control cold, and stillness could control heat.

Keeping the same relationship, we can change the terms to blood and qi. An important saying in Chinese medicine is that *Blood is the mother of qi; qi is the commander of blood*.<sup>b</sup> Pathological changes of material kinds will often be expressed as changes of blood or fluids, such as regarding tumours as stagnations of blood or phlegm. Looking at a body gives fundamental clues to the condition of the blood. Zhang Jiebin wrote:

Abundance and exuberance of the muscles and flesh ... whenever there is form or substance in the human body all depends

b. This statement does not appear as a whole in early texts, but its component parts “qi is the leader of blood” and “blood is the mother of qi” appear separately in a variety of texts.

is translated by Ute Engelhardt in “Dietetics in Tang China and the first extant works of materia dietetica” (2001) *Innovation in Chinese Medicine*, Cambridge University Press. In her translation of *wei* she used the word “sapor” instead of “flavour”.

■ Peter Torssell (Bachelor of Chinese Medicine, Jiangxi University of TCM) has been a practitioner in Sollentuna, outside Stockholm, since 1988. He is also Head of Studies and teacher at Akupunkturakademien in Stockholm. He is currently working with presenting food as medicine from classical Chinese medicine, and in 2000 published a book on the subject (in Swedish).

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on the blood. For instance, if blood declines, the form will wither.”<sup>7</sup>

Li Dongyuan made this comment on a quote in the *Nei Jing* about the connection between the flesh and blood:

Turbid yin forms the earth... penetrates the five viscera, nourishes the blood vessels, moistens the skin and fattens the muscles, flesh and sinews. This is what is meant by (the statement) that blood produces flesh.<sup>8</sup>

Fluids and blood are the material aspects that make up the body, and they should be in balance with qi. A thinner body is a type of yin deficiency, and due to the imbalance with qi will have a tendency towards fire. At the same time, thinking analogically, thin people will also tend to other yang phenomena such as dryness and wind. On the other hand, an obese body has an exuberance of yin in the form of damp phlegm. So a thin body is a type of dryness that is lacking fluids, while a strong, firm body has sufficient blood. If this strong firm body is healthy, it is infused with qi in adequate amounts and considered a strong constitution. But when something is material and heavy, it carries the risk of stagnating. Having a lot of blood/yin must be balanced by enough qi/yang to ensure a free and regulated flow.

The quote opening this article, from the *Book of Rites*, describes how the bodily capacities of people vary according to heaven and earthly influences. In our interplay with the surroundings we are affected by environmental conditions. In Chinese medicine, dampness is related to the Spleen and dryness to the Lungs. Unlike coldness, dryness and heat, which are immaterial, dampness is substantial, and thus must be balanced by enough yang factors such as heat and dryness and the movement and transformative ability of qi. Zhang Jiebin summarises my point elegantly:

Humans have yin and yang, namely qi and blood. Yang governs qi, therefore, if qi is complete, the spirit is effulgent. Yin governs blood, hence if blood is exuberant the body will be strong. These are just the things upon which one's life depends.<sup>9</sup>

### Bodily guide to treatment strategy

The patient cases of Zhu Danxi are described concisely, notably without mentioning tongue diagnosis but often including an observation about the patient's body and character. An example is the following where Zhu applies turnip as a way of opening the circulation in a strong patient:

Replete both in form and complexion ... relying too much on his sturdy (physique) and his ability to eat undaunted, he defied any prohibition ... then I told him to eat only gruel with cooked turnip.

In the *Pi Wei Lun* chapter 13, Li Dongyuan describes the same principle in cases of food stagnation:

Food damage is damage by tangible substance. A mild case calls for dispersion and transformation through reducing food intake. Only severe cases call for ejection and precipitation.

Whenever there is ample physical form, there must be enough qi present for circulation and transformation. When there is insufficient physical form, a different strategy is required. Zhu Danxi wrote:

In the west and north the earth qi is high and thick and the people have strong and sturdy physiques ... People in the south and east or those with blood and qi not replenished... should know that in the west and north, opening what is bound must be made the rule, while in the east and south the rule is to moisten dryness.

The people of the south and east, where it is more common to have qi and blood deficiency, will tend to be leaner and more fragile, and therefore need to be moistened.

### Robust northerners, soft southerners

The availability of food will depend on where we live (earth) and at what time we want to eat (heaven), i.e. at which season of the year. These factors also affect us in other ways, shaping our bodies and cultures. Yin-yang thinking has always been arranged into subcategories such as heat/cold, dryness/moisture and strength/weakness. We see

that the amount and balance of yin and yang have to be appropriately contained for proper strength and firmness.

In Chinese mythology there is a story of how one of the heavenly pillars was destroyed, so that the heavens have tilted ever since in a north-west/south-east direction. In a yin-yang dichotomy, north and west are yin directions, opposite to the yang directions of south and east. In China, the deserts and mountains are in the north and west, while the sea is in the south and east. The climate of the north-west is cold and dry, both factors having a contracting nature. The south-east is relatively hot and damp, both climates having an expanding nature for opposite reasons: heat expands due to force and dampness expands due to lack of force. This is seen in big tongues, made bigger by dampness, which also opens the pores. Subjected to the cold and dry climate of the north-west, the pores close and yang is kept inside following this contracting movement. When subjected to heat and dampness the pores open, which leads to an outward movement as yang leaves the centre. In the north-west this tends to result in people with bigger, stronger bodies with firmer skin and flesh, and in the south-east in smaller, weaker and more fragile people with looser skin and flesh.

The heavier, stronger people in the north-west have more blood and qi, but because of this also tend towards fullness and blockage, which is most often helped by opening up for movement, instead of an enriching method as counselled by Zhu Danxi. On the other hand, the people of the south-east are more slender and need to be strengthened and moistened with enriching fluids such as blood.

The bigger constitutions are ideally purged and dispersed while the smaller constitutions are strengthened and moistened. This becomes a more tricky issue when there is a mixture of yin and yang influences at the same time; traditional wisdom reveals aspects of this regulation as explained by Xue Ji:

The south-eastern regions are low lying, damp and hot; the pores of the people there are loosely opened (*couli shutong*), so their sweat and *ye* fluids drain out and their yang qi is depleted within. Thus, it is appropriate for them to eat black pepper, ginger and

such acrid and hot things in order to boost their yang qi. (However) the north-western regions are high, mountainous, windy and cold, the pores of the people there are tightly closed (*couli zhimu*) so that their sweat and *ye* fluids are secure within, and their yang qi is complete and full. It is not appropriate for them to eat black pepper, ginger and such acrid and hot things that would commonly boost their yang qi.

One will also generally see more cooling foods such as fruits and vegetables consumed in the south-east to counteract the hot climate, and more warming foods such as animal products in the north-west to counteract the cold climate. This is to achieve yin-yang balance for each region, as Wang Lun explains in “On different methods of being regionally appropriate”:

People say that the qi of the south-east is hot (so it is) appropriate to prescribe cold medicines; the qi of the north-west is cold (so it is) appropriate to prescribe warm medicines. However, why is it that these days south-eastern people often consume black pepper, ginger and cassia bark, (yet we) do not see them get sick, yet north-western people avoid consuming acrid and hot substances such as black pepper and ginger? This is because although it is hot in the south-east, the land is low lying and damper; acrid and hot foods and drugs can also expel the dampness. Although it is cold in the north-west, the land is mountainous and drier; acrid and hot foods and drugs can conversely exacerbate the dryness.

*Su Wen* chapter 12 points out the importance of individualising treatment.

Huang Di asked: “When physicians treat diseases, an identical disease may be treated differently in each case and can always be healed. How is that?”

Qi Bo’s response points out differences in physical features depending on geographical location. The first thing we do when meeting patients is to observe them. Qi Bo gives the example of western China where people eat rich food, are overweight and have diseases emerge that must be treated with toxic drugs.

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He contrasts this with the way the people of central China “eat diverse (foods) and are never fatigued”. To treat with toxic drugs is to attack disease drastically, and could harm patients, comparable to the harsh effects of some modern medicines and the drastic diets that might be fitting for overweight Western patients with multiple ailments and diseases.

Historically there are many stories of encounters between Westerners and East Asians describing the Westerners having bigger and stronger bodies and the East Asians as being smaller.

During the 17th century, *Ren Shen* (Ginseng Radix), a famed strengthening herb, was in such huge demand that it almost ruined the Japanese economy. In contrast, Great Britain’s economy was almost overturned due to Chinese tea exports.<sup>20</sup> That *Ren Shen* did not gain the same popularity in the West as the East might reflect constitutional differences. Tea may be more generally suitable for Westerners as it opens up circulation. From a constitutional viewpoint, it makes sense that the Western medical tradition did not have the same development of tonics as the Chinese tradition.<sup>c</sup> When the Western world was exposed to Chinese herbal medicines, *Ren Shen* (Ginseng Radix) was not especially requested but *Da Huang* (Rhei Radix et Rhizoma), a strong purgative for full conditions, became popular.

North China also contrasts with South China in constitutional types. The stronger northern types call more for purging fullness, and the southerners more for nourishing deficiency. Hanson cites the physician Zhu Bishan:

Northern wind and qi are turbid and thick, constitutions are powerful and robust, and combined with their simple and generous natures and frugal diets, no one suffers

c. When studying old and new books on the subject of Western herbal medicine, it is clear that a difference exists between Chinese medicine’s categorisation of strengthening and the Western tradition. Even though the West does use the word “tonic”, it is not as clearly indicated for deficiency states as in Chinese medicine. Deficiency is not clearly defined in the West. In my search for strengthening herbs in the West, for example, I found arctic root (*Hong Jing Tian*, *Rhodiola rosea*), which has been used in Sweden for a long time and is referred to by Linnaeus but is not regarded as strengthening. When the Chinese co-opted it from Tibetan medicine it was categorised among the strengthening herbs.

from violence or loss of vitality through dissipation. As soon as someone falls sick, they use a bitter cold, clearing formula to throw it out, and quickly return the patient to health and spirits. As for southern people, their constitutions are soft and fragile, the pores of their flesh are loose and shallow, they indulge in food and drink and have excessive desires, all of which is completely different to northerners. To treat illnesses in the south, it is best to take as the root the use of (formulas) to nourish the inner qi.<sup>21</sup>

### Materia medicas

It is interesting to see how the ideas of the body and its tissues are correlated with yin, fluids and blood in classical herbal books. A closer look at two of the most important materia medica written at different times in Chinese history, the *Shen Nong Ben Cao Jing* (Divine Farmer’s Materia Medica) and the *Ben Cao Gang Mu* (Compendium of Materia Medica), reveals varying descriptions of herb actions. For example, the earlier text, the *Shen Nong Ben Cao Jing*, described the qualities of *Hu Ma* (Sesami Semen nigrum, also known as *Zhi Ma*) as having a sweet flavour, moistening or enriching the blood to treat emaciation, making one fat, promoting the growth of muscles and flesh, fortifying teeth and hair, promoting the beard, fortifying sinews and bones and replenishing brain marrow. “Protracted taking may make the body light and prolong life.”<sup>22</sup> Ye Tianshi in the later materia medica explained its actions thus:

Yin is the guardian of the centre. Damaged centre is damaged yin blood. The Lungs are the source of transformation of fluids, the Spleen controls the blood and the Heart governs the blood. Sesame enters the Spleen, Lungs and Heart. It is sweet and balanced and therefore boosts the blood. For that reason, it rules damaged centre. The Spleen governs the muscles and flesh. The sweet flavour moistens the Spleen. Therefore (sesame) rules vacuity and emaciation... Sesame is enriching and moistening, therefore it supplements the five *zang*.<sup>23</sup>

Another example from the *Shen Nong Ben Cao Jing* is of *Huo Ma Ren* (Cannabis

Semen) described as a sweet herb that “supplements the centre... makes you fat, strong and never senile”.<sup>24</sup> The *Ben Cao Gang Mu* and other later sources described both *Hei Zhi Ma* (Sesami Semen nigrum) and *Huo Ma Ren* (Cannabis Semen) in terms of moistening the five *zang* or muscles. The action of moistening, nourishing blood and yin, and guarding the centre takes physical expression in fat, muscles, flesh, hair, teeth, etc., which are all yin, and become a basis for yang—a light body, long life, strength, and a clear mind. *Hei Zhi Ma* is described as “the black drug [that] functions on the Kidneys and moistens dryness”. Li Shizhen referred to Wang Haogu when he wrote that *Huo Ma Ren* “should be used to moisten dryness” and to Cheng Wuji when he wrote that “it relieves strained Spleen and moistens dryness”.<sup>25</sup>

### Tight or loose pores

A patient’s constitution is an important criterion for deciding on treatment and disease prevention. The external environmental factors of heat, cold, dryness and dampness can have an impact on the whole person. Whether the pores are tightly closed or loosely open strongly contributes to the shaping of the body, which implies that the Lungs are an important organ.

Humans make a trio with heaven and earth. The reasons can be explained. When there is gradual moistening below, it produces reeds and water plants above... When it is hot, the enrichment of rain stays above, so the roots and stem have less sap. Human qi is located on the exterior, so the skin is relaxed, the interstices are open, blood and qi are reduced, a lot of sweat is discharged, and the skin is muddy and marshy. When it is cold, the earth is frosty and water freezes. Human qi is located on the inside, so the skin is dense, the interstices are closed, sweat is not emitted, qi and blood are strong, and the flesh is hard and rough.

– *Ling Shu* (Spiritual Pivot) 75<sup>26</sup>

Even though the pores have the ability to open and close, to be closed is more often associated with health as this preserves the yang and the fluids. To Kuriyama, *Ling Shu* 50 explains that those with thin skin and flabby flesh will be susceptible to external wind, as

opposed to those with thick skin and firm flesh. He summarises, “Tight pores at once signified and assured vitality, demarcating and safeguarding self from the surrounding chaos.”<sup>27</sup>

*Su Wen* chapter 3 has a description of how food builds the foundation for the organs and leads to perfect health, which involves the skin being sufficiently closed:

If one carefully balances the five flavours, the bones are upright and the sinews are soft. As a result, qi and blood flow, and the interstices are closed.<sup>28</sup>

Closed pores ensure that yang and fluids will stay inside and not be lost. This type of concentration generally correlates with the creation of material substance in Chinese thinking. Elisabeth Rochat de la Vallée wrote in *A Study of Qi* that “form requires substance and essences. The beginning of form is the yin concentration and condensation of qi, which allows substance to appear.”<sup>29</sup>

Closing inward is a yin movement, while opening outward is yang, exemplified by the sweating triggered by hot, damp climates. The yang movement corresponds to the movement of life and joy, and we can see here an example of yin creating yang, bodily form creating the conditions for yang, blood being the mother of qi. But of course yang will in turn create yin, as in the case of well-regulated pores that are dependent on enough qi. Thus, when observing a person, the body and personality reflect the most fundamental idea of classical Chinese cosmology, that the world consists of yin qi (concentrating movements) and yang qi (dispersing movements).

### The Lung

The pores and skin are associated with the Lung, which has a special relationship with the Spleen and Stomach, and is of importance in shaping the physical body. This relationship is understood in dermatology. The involvement of the Spleen is needed to produce new skin—as far back as *Guan Zi* (7th century BCE) the production of skin is correlated with earth/centre—so in the Chinese dietary system, for example, yellow foods may be recommended to treat and prevent wrinkles.

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The Lung has the highest physical position of the organs, and the skin is the exterior border of the body; both have a yang resonance with heaven. Movements between the exterior and the centre, inwards and outwards, have close connections to Lung and Spleen-Stomach, and are manifestations of the healthy regulation of *ying* and *wei* qi. I believe that the failure of this regulation is the main contributor to the modern epidemic of allergic/atopic diseases.

The Lung has a close relationship with the Stomach. Lung and Stomach both act in the body like markets, places of gathering of products for distribution. They are both connected with yin, as both need enough yin fluids to function and to provide the rest of the body with yin. A deficiency in either organ could be expressed as thirst. The fluids manifest differently in the two organs; the Lung fluids, being closer to heaven, will be in the form of steam, a thinner yin, whereas those in the lower position of the Stomach will be thicker, such as denser water or food. Lung and Stomach have the highest physical positions in their respective organ systems, which produces the yin motion downwards. The descent of qi and fluids by Lung and Stomach provides the main impetus for the qi of the rest of the *fu* organs to descend, and is also associated with clearing turbidity from the body, which manifests as being able to empty the bowels and urinate.

The Lung and Spleen share the same channel, *taiyin*, which supports the production and distribution of qi and fluids. “We get air from heaven and food from the earth” the Chinese saying goes, pointing to the work of the Lung and Spleen on the postnatal essences and also their *taiyin* characteristic of opening to the outside.

Lack of fluids manifests in the exterior as wrinkles, dryness, thinness, tightness and sunkennes, as opposed to moisture that exhibits as clear, damp, thick, flabby and filled-out tissues and skin.

### Urges, desires and moderation

Breathing, eating and drinking are fundamental survival behaviours that put the Lung, Stomach and Spleen in the realm of bodily urges and desires. Just as the Spleen is the “vulgar” *zang* that is associated with the lower *fu* dealing with digestion, the Lung

houses the *po*, which controls lower animal urges such as having sex and emptying the bowels. During the Han dynasty, the rulers reasoned that a harmonious and flourishing kingdom was based on sufficiently meeting people’s fundamental needs, and that they would be satisfied as long as they did not go hungry or cold.<sup>30</sup>

To control the desires to a level of being content with enough food or clothing and housing requires the harmony of Spleen-Stomach in eating and the Lungs in protecting from the external climate. This results not only in individual harmony but also has resonant effects on the entire society.

The human body is precious (because) it is inherited from one’s parents. Yet there are no end of cases where the body is damaged for the sake of the mouth, because a person has a body, hunger and thirst arise repeatedly, and one does have to eat and drink in order to continue their life. (However), one can see that in the muddle-headed the indulgence in good tastes leads to excess of the five flavours from which diseases spring up like swarms.<sup>31</sup>

We have feelings, needs and preferences such as hunger, thirst, desire for warmth, dislike of wind, etc., and fulfilling those desires gives us feelings of satisfaction, relaxation and harmony. Not having enough to eat or lacking protection from wind and cold will endanger our lives, but the opposite also poses dangers. To be able to eat and drink excessively, and to be protected from external stress, is not so apparently nor immediately dangerous because it is often connected with feelings of satisfaction and joy. But Chinese medical and philosophical literature warns insistently against this, even though to avoid satiety may seem counterintuitive. Moderation is something to be learned and understood. Important advice is to avoid excessive desires and overindulgence.

If one is controlled by one’s cravings and desires, then he will certainly lose what is natural within.

– *Lu Shi Chun Qiu*  
(Spring and Autumn Annals)

When one reaches the point of

overindulgence, he refuses, so there is no way for illness to arise.

– *Zuo Zhuan* (Commentary of Zuo)

The body's needs, urges and desires are also specific and one can learn how to use them to regulate the qi and blood. They may include preferences, like preferring hot tea to water, or rice and beans to a lamb stew, or even choosing to eat hamburgers with potato chips and cola! Such preferences are a body's call for regulation. Even when junk food is preferred, we can interpret this as a diagnostic signal and assist a person to choose something healthier. The same applies to protecting our bodies. Rather than choosing simple clothes or shelter from the cold and rain, if one prefers certain specific fabrics and colours, special designer clothing brands, or a bigger and more luxurious house with a garden and swimming pool, this indicates the danger of excessive desires and increased urges. We should stop before the point of excess is reached.

The Lung, which is connected to *po* and to sensing what the body needs to survive, is also connected to the ability to put a stop at the limit. It is related to autumn, the season of gathering, and to the hard element of metal which cuts off what is not needed to maintain our integrity. The emotion associated with the Lung, 悲 *bei*, sorrow, is etymologically built on the idea of stopping the natural expansive movement of the Heart. Sorrow is close to feelings such as longing, missing and being unsatisfied, which naturally links to desires. *Su Wen* chapter eight on the functions of the organs says this about the Lung:

The Lung is the official functioning as chancellor and mentor. Order and moderation (*zhi jie*) stem from it.<sup>32</sup>

Unschuld translates the word 節 *jie* as moderation. The character is an image of a bamboo knot, and it could also mean joint, acupuncture points, moral integrity, qi, rhythm, climate period, a section, or within limits. Fruehauf has shown that this word is often used in terms for restraint especially in areas of food and emotions.<sup>33</sup> Rochat de la Vallée points out that *jie* is not a constraint that inhibits and bridles, but an embodiment of the natural rhythm of life, a return to the

original nature,<sup>34</sup> the opposite to wastage. Some examples of *jie* used in classical books:

To set limits (*jie*) for our physical and emotional desires, that is wisdom.

– *Guan Zi* 11

To open and close, that is what *jie* (close) means.

– *Han Shu* 2<sup>35</sup>

Just as the modern West regards a person with an exaggerated interest in material things, fashion, appearances, sex or good food to be “shallow”, early classical Chinese had similar thoughts about external and internal hierarchical values.

According to Zhuang Zi, nourishing the internal and not the external, or nourishing the external via the internal, is the right path to understanding real needs. Generally, desires are associated with the sensory surfaces of the body, notably situated away from the heart-mind—the nose, eyes, ears, mouth and fingers.<sup>36</sup> The classics warned against over-nourishing the external and forgetting the internal.

Longing and desire cause the qi of man to be dispersed, and liking and loathing cause the heart of man to be weary.<sup>37</sup>

– *Huai Nan Zi* 7

If you know when to stop, you'll suffer no harm. And in this way you can last a long time.

– *Dao De Jing* 44

An early idea from Daoism was that exaggerated desires connect to an abundance that must be expelled. This excess could be called “the three worms” or “the three death-bringers”. A way to expel them was through the right dietary regimen that resulted in independence from material things, luxury, rich foods and alcohol.<sup>38</sup> In this light it is easy to understand Zhu Danxi's warning on how easily the constitutional strength of children can be undermined:

Some women are ignorant and do not know better than to satisfy all the child's wishes. Out of fear that the child will cry, it will be denied nothing ... therefore it is

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The sweet and salty flavours are the most manipulated, refined and synthesised in modern fast food products, which in my opinion hugely contributes to chronic disease and illnesses connected to the Western lifestyle.

common that the children of the rich are affected by many diseases and when they grow up they have soft and fragile sinews and bones.<sup>39</sup>

#### Axis for regulation of fluids and body

In death, yin and yang separate, and the yin body is all that remains. The *hun* leaves and the *po* stays to transform the body back to earth. After death there is only the skin enveloping the flesh and bones, which are the tissues related to the Lung, Spleen and Kidneys, the three organs most connected to yin. In Chinese anatomical order, from above to below, from external to the deepest:

Vertical	Horizontal
Above & below	External & internal
Lung	Skin
Heart	Mai
Spleen	Flesh
Liver	Jin
Kidneys	Bones

The skin, flesh and bones are clearly material form but the *mai* and *jin* are more functional. *Mai* is the regulated flow of qi and blood and *jin* is the utilisation (contraction and relaxation) of the flesh so that the body can move. So *mai* and *jin* are more yang, relating to the two more yang-related *zang*, and need yin blood to function properly. The “yang tissues” are found in between the “yin tissues” displaying an interchange between yin and yang: bone to *jin* to flesh to *mai* to skin. This naturally puts the Spleen and flesh in the centre, emphasising the central importance of the earth element in harmonising and nourishing the other four. Another presentation of a slightly different order is: bone, *jin*, *mai*, flesh and skin.<sup>40</sup> Here flesh and skin are a pair, being neither too loose nor too firm.

The three organs that manifest the most yin tissues are those that regulate the fluids of the body: Kidneys in the lower *jiao*, Spleen in the middle *jiao* and Lung in the upper *jiao*. The upper *jiao* is portrayed as an area of clouds, below which are more watery, dense and heavier areas. The flavour relating to the Lung is acrid, and correspondingly it is

the most yang flavour related to these three organs, as it moves and circulates qi to be able to transform and move fluids. The other two flavours, the sweet of the Spleen and the salty of the Kidneys, are also engaged in regulating the fluids, moistening and nourishing the body. Tao Hongjing combines sweet and salty flavours to moisten dryness.<sup>41</sup>

The sweet and salty flavours are the most manipulated, refined and synthesised in modern fast food products, which in my opinion hugely contributes to chronic disease and illnesses connected to the Western lifestyle. Since they regulate the Spleen and Kidneys, which provide us with the essences, the consequences of changes in quality and quantity of sweet and salty flavours in our foods is seen in the constant reconstruction of our bodies.

#### Ancient theories in modern times

The Chinese ideas are that external factors, choices of food and internal desires contribute to the shaping of our bodies, and that all these build the foundation for future health or disease. From moment to moment, what we are, do and feel makes a difference. Do these ideas still apply in modern times? Li Zhongzi in *Yi Zong Bi Du* (Essential Readings from Our Medical Ancestors) says:

In general, the wealthy and noble labour their minds, and the poor and ignoble labour their bodies. The wealthy and noble feed themselves rich foods and grains; the poor and ignoble fill themselves with sprouts and beans... Those who labour their minds have depleted centre, weak sinews and brittle bones. Those who labour their bodies have full centres, strong bones and powerful sinews. Those who feed themselves on rich fare always have delicate organ systems. Those who fill themselves on sprouts and beans always have strong organ systems. Those who live in winding buildings with broad hallways have loose pores so that the six pathogenic factors can reside (in their bodies). Those who live in thatched huts in alleyways have tight pores so that the external pathogens have a hard time getting (into their bodies). Thus, the maladies of the wealthy and noble are well suited to (prescriptions) that restore *zheng* (qi that has been depleted) and the maladies of the poor

and ignoble will benefit from (prescriptions) that attack *xie* (qi).<sup>42</sup>

Qi Bo in *Ling Shu 18* says:

As for strong men, their qi and blood is in full power, their flesh is oily, their qi flows freely (*qi dao tong*), the circulation of *ying* and *wei* occurs normally; this is why they are full of vitality in the day and they sleep well at night. As for old men, their qi and blood is in decline, their flesh dries out, their qi flows with difficulty, the qi of the five *zang* fight with each other, their *ying* declines and becomes scarce while their *wei* qi is drained on the inside. This is why they are without vitality in the day and they do not sleep at night.<sup>43</sup>

These “old men” could be a fairly typical patient of any age or gender of today whose blood is deficient at the same time as their qi is unregulated, manifesting in symptoms such as pains and stiffness of the body, frequent colds, fatigue, and feeling tense and uninspired during daytime while having insomnia at night.

Zhu Danxi described another scenario common for modern people: thin people tend to tension while obese people have different weaknesses:

When the major sinews become flaccid and shortened, this is heat damaging the blood which is no longer able to nourish the sinews. As a result hypertonicity arises. When the minor sinews become relaxed and lengthened, this is dampness damaging the sinews which are no longer able to bind the bones. As a result atonic weakness arises.<sup>44</sup>

Optimal strength should be neither too hard because of dryness nor too soft because of moisture. The *Jin Guo Yao Lue*, clause 6-1, says this about exhaustion:

What is the cause of arthralgia due to blood stagnation (*xue bi*)? Persons who live lives of leisure generally have weak bones and rich flesh and muscle. After working for a short period of time, they feel tired and begin to sweat. When they lie in bed they toss and turn frequently. If they are exposed

to a breeze (*wei feng*) at this time, they will suffer from arthralgia due to stagnation of blood.<sup>45</sup>

Rochat de la Vallée explains that this is someone of the upper class, who does not move around physically but eats fine tasting, sweet and fatty foods in large quantities.<sup>46</sup> This weakens the bones, muscles and sinews, and causes the skin to be flabby and loose. *Wei* qi cannot close and open the pores in a regulated way. The person is deficient in yang.

All this is observable today, but modern choices and lifestyle factors are more diverse. Our lifestyle is somewhat similar to descriptions of southern people in ancient China living indulgent lives filled with leisure time, like the wealthy, sensitive nobles who laboured only their minds. On the other hand, there are some with strong physiques who choose a lifestyle similar to a northern person, with a simple diet, controlled desires and displaying great discipline in physical training. There are also many combinations of this, such as the young men who idealise having strong bodies, so they build their muscles to an extreme while taking supplements like protein powders, yet also sit around watching television or playing computer games; young men who are used to having their way, don't want to work for a living, are indulgent in their desires and irregular in their habits of sleep, alcohol or sweets.

At the same time, there is less likelihood of having to live in extreme climates due to modern inventions like central heating, air-conditioning and electricity. Traditional foods have been replaced by new ways of eating and environmental pollution has an impact. Is classical Chinese medicine useful in sorting out the more complicated patients of a modern, high-tech society? Without doubt, the answer is yes; these complexities are well suited to holistic systems like Chinese medicine.

To understand how to treat complicated modern patients, I believe *Su Wen 77* is as important now as it was when it was written. It addresses a physician's success and how to avoid failure. The physician needs to understand lifestyle factors, especially around eating habits and the general mentality of the patient. And as pointed out

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*What about those northern areas where darkness prevails for most of the year? These are colder areas so the skin tightens and yang remains in the centre. As a consequence, the digestion is stronger, often shown by a big appetite. This makes possible the digestion of rich, nourishing foods such as animal fats and protein.*

in *Su Wen* 12 and elsewhere, the body type is an important part of the diagnosis. This classical Chinese thinking is conclusively useful for modern patients.

#### The evidence base

Although these fundamental Chinese ideas are time-tested, we often still need to verify them within the modern paradigm of scientific materialism that holds biochemical explanations in the highest regard. When we look, we can find a huge number of scientific studies on the effect on the body of light, darkness, temperature and food that verify these ancient ideas.

Taking the idea of body as blood and fluids, older men have 21 per cent lower plasma volume and 28 per cent lower red blood cell volume than healthy young men.<sup>47</sup> Yet actually 70 per cent of this lowered volume can be due to simple lack of exercise, as seen when other studies compared fit older men with sedentary older men.<sup>48</sup> Further, when exercising, the heat regulation by sweating depends on body size; a smaller body sweats less.<sup>48</sup>

The blood circulation between the peripheral and central parts of the body can vary by more than 50 per cent as a consequence of stimuli at the skin such as sunlight, and vascular dilation increases after heat exposure. The blood that circulates in the skin contains lots of different substances like hormones, affected by different wavelengths of light. Growth hormone, thyroxine, progesterone, testosterone and cortisol are all affected differently depending on time of day and season.

Another example of sunlight's influence is that energy production from the mitochondria is increased from the infrared part of the light spectrum.<sup>49</sup> A closer look at the well-established effect of sunlight shows a relationship to vitamin D and to melatonin production. We know that the effect of skin exposure to sunlight leads to stronger bones via vitamin D. We can see this as an example of yang leading to transformation and to stimulation of yin in the depths, or we can see it as stimulation of the Lung (skin, metal) to nourish the child, Kidneys (bones, water). Deficiency of vitamin D correlates with many chronic problems and ailments such as tiredness, depression, diabetes, obesity, hypertension, cancer, heart disease

and sleep apnoea<sup>51</sup>—many of these related to metabolic syndrome.<sup>52</sup> Getting enough yang in the form of sunlight or physical movement (preferably simultaneously as movement in the outdoors) can prevent many of these problems. The beginning stage of our bodies' conversion of sunlight into vitamin D is when light hits the cholesterol circulating in the periphery.<sup>53</sup> This means that we must have enough cholesterol to synthesise vitamin D and it also means that cholesterol levels tend to be higher during the winter.<sup>54</sup>

But what about those northern areas where darkness prevails for most of the year? These are colder areas so the skin tightens and yang remains in the centre. As a consequence, the digestion is stronger, often shown by a big appetite. This makes possible the digestion of rich, nourishing and more difficult-to-digest foods such as animal fats and protein. Here is where nature offers the best food sources of vitamin D in the most available form. Vitamin D is a fat-soluble vitamin and the foods with the highest content will also provide fats, cholesterol and other fat-soluble vitamins that cooperate to generate health effects and to reduce toxicity. Among the best sources of vitamin D are strengthening foods such as eel, sardines, salmon, egg, pork, shrimps, lamb and cream.<sup>55</sup>

When darkness sets in at the evening, we start producing the hormone melatonin to prepare for sleep. Melatonin is associated with lots of other effects such as decreasing energy production from the mitochondria, increasing cell regeneration, acting as a cortisol-antagonist, etc.<sup>56, 57</sup> This means that too much light as with the “light pollution” of cities or inside homes has physiological consequences, not only affecting sleep quality. Generally, we can see yin-effects from having sufficient melatonin and sleep. Food also has an effect on melatonin levels, which is resonant with Chinese ideas. Higher vegetable intake is associated with higher melatonin levels and more meat consumption with lower melatonin production.<sup>58, 59</sup> Fruit and vegetables have varying effects on melatonin. One study found that pineapple raised the levels the most.<sup>60</sup>

When we take a closer look at some effects of heat and cold, we have to be aware that there is both a direct effect of exposure to these climates and also a reactive effect that

prepares us for the next time we encounter these stress stimuli.

In a hot climate the blood vessels dilate and the blood flow increases in the skin, which leads to sweating. This dissipates some core heat<sup>61</sup> and the direct effect is a raised heart-rate but the reaction in the long run leads to a lower pulse rate, similar to the effect of aerobic exercises.<sup>62</sup> There is a biological observation that the lower the heart-rate, the longer we will live,<sup>63,64,65</sup> which could be interpreted in Chinese medicine as having enough yin to support yang, even independent of physical fitness.<sup>66</sup> One study about whether foods could have the effect of lowering the pulse found that beans and lentils actually did just as well as exercise.<sup>67</sup>

The scientific findings of dissipated core heat and a lowered pulse rate correspond well with the Chinese idea of less internal yang. This tends to lead to reduced appetite and decreased digestive strength, which makes eating lighter “qi foods” preferable.<sup>67</sup> These are the foods that nature offers in abundance in hotter areas or seasons, generally vegetables and fruits. Grains, root vegetables and fruits all mature into having the sweet taste although having different types of sugars. Apart from many of these foods containing high water content, their sugars assist in re-moistening the body, both according to Chinese medicine and modern physiology. When nature has this type of “opening” movement stimulated by heat, we see it even down at the cellular level. In heat there is an increased insulin sensitivity, which lowers the raised levels of blood sugar and insulin resulting from eating these high sugar-content foods.<sup>68</sup>

A hot climate generates a warm, expansive qi movement similar to exercise or the consumption of spices. Experiments have shown a similar effect on a peptide called dynorphin as a result of intense exercise, sauna bathing or eating chili.<sup>70,71</sup> The discomfort felt during these activities is linked to the release of dynorphin. This is followed by an upregulation of beta-endorphin which gives feelings of comfort, satisfaction and even euphoria. The outward qi movement is related to different types of joy in Chinese medicine and when experiments have shown an anti-depressant effect of heat, beta-endorphins are one of the

suggested explanations.<sup>72</sup>

Although the Chinese dread cold as a climatic factor, they have also pointed out its positive effects. One effect of being subjected to cold is a significant increase in norepinephrine (noradrenaline).<sup>73</sup> Acting as both neurotransmitter and hormone, increased levels of norepinephrine have several effects: blood vessels constrict, which helps to conserve heat, the substance acts as a signal molecule to increase the synthesis of mitochondria in the fatty tissues, which produces energy and heat as a by-product, and it also decreases inflammation and alleviates pain and depression.<sup>74</sup> As it helps us to resist cold, we can view its effect as yang being kept in the centre. To be able to live in a dark, cold environment, nature provides us with strong circulation of the body and a content mind.

The production of energy from our cells (the mitochondria produce ATP) uses sugars, fatty acids or amino acids (protein building stones) as fuel, producing heat at the same time as a by-product (thermogenesis).<sup>75</sup> Proteins produce the most heat and animal proteins and fats are traditionally the foods most available for people living in colder areas, during colder seasons. Among proteins, animal compared to vegetable protein leads to more thermogenesis with implications of raised metabolism.<sup>76</sup> This links to a tendency for raised activity levels and weight loss in obese people.<sup>77, 78</sup> Eating animal protein is also linked with increased muscle mass and a reduction in the muscle loss that occurs with age.<sup>79, 80, 81, 82</sup>

Fat tissues are of three types: white, brown and beige. Brown adipocytes have more iron-containing mitochondria that give them the darker colour. White adipocytes store fat, brown produce heat and the beige lie embedded in white fat and can be triggered to produce energy and heat depending on stimuli. The less brown fat we have, the more obese and sensitive to cold we become. The older we get, the less brown fat we have.<sup>83,84</sup> So, by increasing internal yang, we will produce more brown fat. If we exercise enough and eat the right foods to become lean and strong enough and subject ourselves to cold, we stimulate production of brown fat.<sup>d</sup>

d. We can relate brown fat to the water element and *taiyang*. It is found in highly vascularized deposits in consistent anatomical locations, such as between the

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*Guan Zi 49 says, if the Heart is complete within, the form will be complete without.*

### Final thoughts

That which humans depend on for life is blood and qi. Either because of melancholy, thick flavour, absence of sweating or supplementing formulas, qi may soar up and blood boil ... and coagulate ... obstructed and inhibited.<sup>85</sup>

Chinese medicine places an individual in a context where the place, time and climates, desires, feelings and food have an impact, defined in correlative terms, making it easier to understand how to intervene if necessary. This article has expressed these correlative terms as yin, yang and qi. The two main movements of qi we have discussed are inward and outward and these fundamentally reflect the important yin-yang dualism of classical Chinese cosmology. The inward movement of qi correlates with yin and the accumulation that results in a material body. The outward movement of qi correlates with yang and the dispersion that leads to a thinner physique. Apart from body, yin correlates with centre, with blood, and *wei* (taste) as opposed to periphery and qi (put in dichotomy with both *wei* and with blood).

Qi movement could be initiated from the inside by changes in attitude or choice of food, or from the outside by the climate and our efforts to protect ourselves from it. Cold and heat result in changes of qi manifesting in both body and mind. Cold firms the skin and flesh, keeping yang on the inside, creating a firm, stable individual with a big, strong body and controlled urges. Heat opens the skin and loosens the flesh, causing yang to leave the centre, creating a relaxed, more sensitive, more changeable individual with a slender, weaker body who tends to be more indulgent in urges and desires.

How we prevent imbalances is by having enough restraint to build form and yang, but only up to a certain point, because it is also imperative to keep the circulation open. On the other hand, we must maintain enough openness to permit free circulation and an uninhibited sense of relaxation, but not to the point of losing control and therefore of losing essences and yang. An important way

shoulder blades, surrounding the kidneys, the neck and supraclavicular area, and along the spinal cord.  
[https://en.wikipedia.org/wiki/Brown\\_adipose\\_tissue](https://en.wikipedia.org/wiki/Brown_adipose_tissue)

to do this is through food regulation.

The question of whether genetic or environmental factors are the most dominant influence on health and body would be answered in Chinese medicine as *both*, with emphasis placed on postnatal factors—an empowering idea. We are born with certain traits and tendencies (prenatal *jing*) and then we are influenced and formed by what we think and feel, our activities, what we eat, climates etc. Everything that affects our health potentially also affects our form. All three causes of diseases (external, internal, neither external nor internal) can affect the organs, but the Spleen is the organ most integral to the bodily form on a daily basis. As we have seen, the food eaten is related to an interplay among different organs and other factors such as our climate and our response to climatic factors. Foremost is the heavenly influence of our heart/mind. *Guan Zi 49* says: “If the Heart is complete within, the form will be complete without.”<sup>86</sup>

All this is very complicated, but also simple. The bodily form results to a large extent from the choices we make, and our awareness of this hands us a certain amount of control when needed. This article set out quoting Sun Simiao, and I will end with more of his words on the attitude we should cultivate to protect our health: “One who is able to realise awe and care is safe from harm.”<sup>87</sup> Oh, so simple; the same mentality for having a nice dinner party also applies to health.

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