

References and endnotes

Abbreviations used

SW-n: *Su Wen*, Chapter n

LS-n: *Ling Shu*, Chapter n

NJ-n: *Nan Jing*, Section n

fn. footnote

en. endnote

Chapter 1

¹ Hu Hou-hsüan, 1944, p.11a. Cited by Unschuld, 1985, p.21.

² Chang Tsung-Tung, 1970, p.69. Cited by Unschuld, 1985, p.21.

³ Akatsuka Tadashi, quoted in Kanō Yoshimitsu 1980, p.283. Cited by Unschuld, 1985, p.25.

⁴ Wilhelm, 1930, pp.32-33. Cited by Unschuld, 1985, p.36.

⁵ Unschuld, 1985, p.36.

⁶ Ssu-miao, 1965, p.347. Cited by Unschuld, 1985, p.45.

⁷ Eichhorn, 1976, p.27. Cited by Unschuld, 1985, p.35.

⁸ Unschuld, 1985, pp.54-55.

⁹ Unschuld, 1985, p.58.

¹⁰ Yamada, 1979. Cited by Unschuld, 1985, p.63.

¹¹ Unschuld, 1985, pp.56-61.

¹² Unschuld, 1986, p.3.

¹³ *Wu-shih-erh ping fang*, 1979, pp.1-20. Cited by Unschuld, 1985, p.74.

¹⁴ Ssu-ma, 1969. Cited by Unschuld, 1985, p.93.

¹⁵ Unschuld, 1985, pp.92-97.

¹⁶ LS-12 states “His outer appearance can be measured. His structures can be followed and pressed with the fingers so as to locate them. Once he has died, he may be dissected to observe his interior appearance. Whether the long-term depots are firm or brittle...” (Unschuld, 2016, p.217). In LS-31, the size, shape and path of the stomach and intestines are given in some detail, which could only have been determined by dissection of a corpse (Unschuld, 2016, pp.355-356). And in NJ-42, the size, shape and dimensions of every organ is given in detail (Unschuld, 1986, pp.416-8). See also Unschuld, 1985, pp.213-215 and 236-238.

¹⁷ Unschuld, 1985, pp.78-79.

¹⁸ In Unschuld’s early translations of the *Nan Jing* (1986) and the *Su Wen* (2011), he translates *zang* as “depot” and *fu* as “palace”; whereas in his later translation of the *Ling Shu* (2016), he now translates *zang* as “long-term depot” and *fu* as “short-term repository”. The non-medical meaning of *fu* was clear, but its use in the medical context was less easy to translate, and this is reflected in his changed translation of the term. During the late Zhou and early Han dynasty, the meaning of *fu* changed, from “short-term storage facility”, to also signify venues of administration, and subse-

quently a palace where an administrator resides. Hence, Unschuld's translation of *fu* as "palace" (see Unschuld, 2011, pp.16-18). In his 2016 translation of the *Ling Shu*, he now prefers the term "short-term repository" instead of "palace" as a translation of *fu* (see Unschuld, 2016, p.13, footnote 11). Whatever his reason for the changed translation, to me, this new choice does seem more suitable, since I previously found the term "palace" misleading. It suggests a more important organ than a depot might represent; whereas the depots (the *zang*, or *yin* organs) are in fact the more important organs.

¹⁹ Unschuld, 2011, Vol I, p.16; or Unschuld, 1985, pp.81-82.

²⁰ Yang Shang-shan, 1981, pp.63-69. Cited by Unschuld, 1985, p.82.

²¹ Unschuld, 1985, p.82.

²² LS-28 states "...As for the very first origin of all diseases, they all originate from wind, rain, cold and summer heat, from yin and yang [influences (*chi*)], joy and anger, from beverages and food and from living conditions, from being severely scared and from sudden fear. Then blood and [influences] may separate; the yin and the yang [influences] may be destroyed; the conduits and network vessels may have receding [influences], and circulation may even be interrupted, with the vessel paths being impassable..." Unschuld, 2016, p.328.

²³ Tian, 2007.

²⁴ Unschuld, 2011, Vol I, pp.155-159 (SW-8).

²⁵ Unschuld, 1985, p.67

²⁶ Unschuld, 2011, Vol II, pp.244-284 (SW-69).

²⁷ Unschuld, 1985, p.81.

²⁸ See Unschuld, 1985, p.71; Unschuld, 2016, pp.603-612 (LS-66); Unschuld, 2016, pp.739-751 (LS-79).

²⁹ See the commentaries in the Unschuld translation of the *Nan Jing*: Unschuld, 1986.

³⁰ The evidence to support this hypothesis is described in Chapters 17-20, and the hypothesis is summarized on page 372.

Chapter 2

¹ Unschuld, 1985, pp.71-73. See also Unschuld's introduction to his translation of the *Nan Jing*: Unschuld, 1986, pp.13-14.

² Cited by Unschuld, 1986, p.349. The comment was made as a commentary on Section 31 of the *Nan Jing*, when Yü Shu wrote "The *Ling Shu* states 'The upper section of the [*san jiao*] resembles fog'. That is to say, when it passes the influences, that resembles mist gently flowing into all the [meridians]."

³ Unschuld, 1985, pp.75-78.

⁴ In SW-56, it states "When evil settles in the skin, then the interstice structures open. When they have opened, then the evil enters the [collaterals (*luo mai*)] and settles there. When the [collaterals] are full, then it pours into the [meridians]. When the [meridians] are full, then [the evil] enters the [organs] and lodges there." (Unschuld, 2011, Vol II, p.42.)

⁵ "Jing" is defined, rather poetically, in LS-30, which states "When the two spirits strike at each other, their union results in the formation of a physical appearance. That which usually precedes the generation of a human body, it is called 'essence'." (Unschuld, 2016, p.351.) The phrase *two spirits strike at each other* is referring to the sexual union of a man and woman. This results in a *physical appearance* (i.e. the start of a foetus), and "that which preceded" this (the merging of the "two spirits"; i.e. the combining of the genetic and "energetic" blueprints of the two people—p.177), this is the essence passed on to the new person.

⁶ Cheng X, 1999, p.52.

⁷ Unschuld, 2016, p.352 (LS-30).

⁸ LS-59 describes the process of "draining" excess influence through various "holes" (Unschuld, 2016, p.538), as do many passages throughout the

Nei Jing. And LS-71 describes the “opening of clogged ditches” in the context of clearing “evil visitors” (pathogens) from the meridians (Unschuld, 2016, p.633).

⁹ Unschuld, 2011, Vol I, pp.668-669 (SW-45).

¹⁰ Unschuld, 2011, Vol I, p.586 (SW-39).

¹¹ Unschuld, 2011, Vol II, pp.40-41 (SW-56). The next sentence following the extract reads “In case it consists of plenty of heat, then this causes the sinews to slacken and the bones to waste, the flesh to melt away, and the protuberant muscles to be destroyed. The body hair stands up straight and breaks.” I omitted this because I felt the language, whether it be intended literally or metaphorically, requires too much imaginative interpretation on the part of today’s reader to be able to take it seriously. Such imaginative adventures are left to those students who wish to refer to the original texts to make what they can of them.

¹² Unschuld, 2016, p.254 (LS-17).

¹³ Unschuld, 2016, p.42 (LS-1).

¹⁴ Unschuld, 2016, pp.766-767 (LS-81).

¹⁵ Unschuld, 2016, pp.401-404 (LS-39).

¹⁶ “...the *Suwen* was not the work of a single author. ...it combines texts written by numerous authors over an extended period of time. However, this *extended period of time* may...have lasted for no more than two centuries.” (Unschuld, 2011, p11). “Much of the version [of the *Ling Shu*] known today probably dates back to individual, shorter texts that began to be written between the 2nd and 1st centuries BCE.... The authors of these texts are unknown, as is the individual who, at some point in that time, collected the individual texts into one great work.” (Unschuld, 2016, p.1).

¹⁷ Unschuld, 2016, pp.249-251 (LS-16).

¹⁸ Unschuld, 2016, p.555 (LS-60).

¹⁹ Unschuld, 2016, p.565 (LS-62).

²⁰ Unschuld, 2016, p.447 (LS-47).

²¹ Unschuld, 2011, Vol I, p.191 (SW-10).

²² Cited by Berk, 1986. However, no date is given for the chart. Berk’s book translates ancient Chinese Kung-fu texts, the earliest dating from 1591 AD, so it may be assumed that the anatomy charts date from around this period.

²³ Unschuld, 2011, Vol I, p.649 (SW-43).

²⁴ Unschuld, 2011, Vol I, p.372-376 (SW-21).

²⁵ Unschuld, 2016, pp.523-4 (LS-56).

²⁶ Unschuld, 2016, pp.631-632 (LS-71).

²⁷ Unschuld, 2011, Vol I, pp.584-586 (SW-39).

²⁸ Unschuld, 2016, pp.259-260 (LS-18).

²⁹ Unschuld, 1986, p.341.

³⁰ Cited by Unschuld, 1986, p.343.

³¹ Cited by Unschuld, 1986, p.344.

³² Cited by Unschuld, 1986, pp.343.

³³ Cheng X, 1999, p.41.

³⁴ Unschuld, 2016, pp.524 (LS-56).

³⁵ Cited by Unschuld, 2016, p.525, fn.4.

³⁶ Cited by Unschuld, 2016, p.524, fn.1.

³⁷ Unschuld, 2016, p.764 (LS-81).

³⁸ Unschuld, 2016, pp.264-265 (LS-18).

³⁹ Maciocia, 1989, p.71.

⁴⁰ Cheng X, 1999, p.28 and 54. (It should be stated that in editions of my own book previous to June 2017, I also followed this tendency set by today’s Chinese medicine textbooks—until I had thoroughly researched the *Nei Jing* and *Nan Jing*.)

⁴¹ —Though they appear to have not considered what the process of “extracting” something from the food or air would involve, in terms of physiological stomach or lung function; or, due to the absence of knowledge of chemistry and of the microscopic anatomy of the organs, the concept of physiology (as we know it—i.e. the chemical breakdown and transformation of substances, and the microscopic workings of the body which perform such things) did not then exist, so it did not even occur to them to ponder such things. That is, as we would think of them. However, they did consider this detail using the notion of “physiology” available to them, which was a metaphorical

one. They considered that such processes consisted of the stomach somehow “cooking” the food, so that the vapours rose from the food (just as happens when cooking in reality), and those vapours were then able to split into their *yin* and *yang* components and circulate the body via the meridians. However, there was no such process imagined with the lungs. It is possible that because the air was already in a vapour-like form, they imagined there was no need for the lungs to process it to transform it into a useable vapour.

⁴² Cheng X, p.34, states that the lung “is closely related to the formation of pectoral *chi* [i.e. chest influence], which is formed from the combination of the essential *chi* of water and food, and the clear *chi* inhaled by the lung.” This notion does not originate from the *Nei Jing*. On the same page, the book also states that the lung “inhales clear *chi* from the natural environment and exhales waste *chi* from the interior of the body”. This function of exhaling waste is also a modern invention, and does not appear in the *Nei Jing* (p.41). (It should be stated that in editions of my own book previous to June 2017, I also followed this tendency set by today’s Chinese medicine textbooks—until I had thoroughly researched the *Nei Jing* and *Nan Jing*.)

⁴³ And I would again make it clear that in editions of my own book previous to June 2017, I also followed this tendency set by today’s Chinese medicine textbooks—until I had thoroughly researched the *Nei Jing* and *Nan Jing*.

⁴⁴ Unschuld, 1985, pp.75-77.

⁴⁵ Friedland, 2009.

⁴⁶ Waugh, 2001, pp.60-65.

⁴⁷ Waugh, 2001, pp.61-67.

⁴⁸ Unschuld, 2016, p.14, Introduction section (includes descriptions of why “blood is blood”, etc.).

⁴⁹ Unschuld, 2011, Vol I, p.649 (SW-43).

⁵⁰ Unschuld, 2016, p.604 (LS-66).

⁵¹ Unschuld, 2011, Vol I, p.337 (SW-19).

⁵² Unschuld, 2011, Vol II, p.73 (SW-60).

⁵³ Unschuld, 2016, pp.604-611 (LS-66).

⁵⁴ Unschuld, 2016, p.328 (LS-28).

⁵⁵ Unschuld, 2016, pp.603-611 (LS-66).

⁵⁶ Unschuld, 2011, Vol I, p.72 (SW-3).

Chapter 3

¹ Porkert, 1974.

² Kim, 1963, p.32.

³ NJ-1 states “When a normal person exhales once, the contents of the vessels proceed three inches; when a normal person inhales once, the contents of the vessels proceed three inches too.” (Unschuld, 1986, p.65). This equates to a speed of around one inch per second, which translates to 2.54 centimetres per second, or 152 centimetres per minute. However, is it clear that the statements in this *Nan Jing* section are theoretical and arbitrary, for the following reasons. It also states that the rate of the movement in the vessels is directly linked with the speed of breathing, and that the contents of the vessels perform a cycle of the entire meridian circuit 50 times a day. These two statements are contradictory, since if the breathing rate increased or decreased, then so too would the number of cycles per day completed. But more importantly, these theories suggest that a child’s breathing rate ought to be considerably slower than an adult’s. Depending on the size difference between the two people compared, a small child’s breathing rate may need to be four or six times slower than an adult’s, and a baby’s rate perhaps ten times slower—so that the contents of the vessels would circulate the person’s body 50 times a day, in all cases. These theories make no sense and are not borne out by reality, so can only be wrong—like so many other *Nei Jing* theories, in contrast to their practical observations.

Chapter 4

¹ Betts, 2013, section: 23.6 Accessory Organs in Digestion: The Liver, Pancreas, and Gallbladder.

² Berg, 2002, section: 30.2, Each Organ Has a Unique Metabolic Profile.

³ Betts, 2013, section: 17.9 The Endocrine Pancreas.

⁴ Bronte, 2013.

⁵ Cesta, 2006.

⁶ Note that the correct attribution is also indicated by the *yin-yang* pairing of the meridians (p.348). When the bodily structures were defined during evolution, such pairings were established due to the functional relationships between the organs (Chapter 19). And due to the functional relationship between the pancreas and stomach, the pairing of these organs now makes sense. Whereas there is no conceivable reason why evolution would have paired the stomach and spleen organs, since there is no functional relationship between them (page 208 describes the functional relationship between the heart and small intestine, and page 137, that between the lungs and large intestine). This indicates that the meridian paired with the stomach meridian, should therefore be associated with the pancreas, rather than the spleen. But further, the spleen could not even be considered a *yin* organ; it is part of the lymphatic system, which is a *yang* organ (p.211), therefore evolution would not have paired it with the stomach, which is *also* a *yang* organ.

⁷ Unschuld, 1986, p.417 (NJ-42).

⁸ Waugh, 2001, p.133.

⁹ Clearly it was not known to all, since some authors got the location of key organs wrong, such as the liver, lungs and “pancreas”; see page 270.

¹⁰ Betts, 2013, section: 23.1 Overview of the Digestive System.

¹¹ “General weakness” (i.e. the four limbs not working) is associated with the pancreas in SW-29

(Unschuld, 2011, Vol I, pp.482-483); and (i.e. “the body feels heavy”) in LS-35 (Unschuld, 2016, p.377); and (i.e. “the body and all its limbs feel heavy”) in LS-10 (Unschuld, 2016, p.183).

¹² “Emaciation and malnutrition” (i.e. the sinews, muscles and flesh not having the “nourishment” to “live”) is associated with the pancreas in SW-29 (Unschuld, 2011, Vol I, pp.482-483). And LS-10 associates “the muscles and the flesh soften” with illness of the pancreas (Unschuld, 2016, p.198).

¹³ “Poor appetite” is associated with the pancreas in SW-50 (Unschuld, 2011, Vol I, p.735).

¹⁴ “Abdominal bloating and discomfort” (i.e. “distension and obstruction”) is associated with the pancreas in SW-29 (Unschuld, 2011, Vol I, pp.482-483); in SW-10 (Unschuld, 2011, Vol I, p.195); in SW-50 (Unschuld, 2011, Vol I, p.735); in LS-47 (i.e. “accumulation in the lower flanks accompanied by pain” and a “feeling of fullness and tends to develop abdominal swelling”) (Unschuld, 2016, pp.452-453); and in LS-10 (i.e. “the abdomen is swollen”) (Unschuld, 2016, p.183).

¹⁵ “Excess gas” (i.e. “intestinal flush”, which is defined by Wang Bing/Unschuld as “gases”—see fn.10 in following reference) is associated with the pancreas in SW-29 (Unschuld, 2011, Vol I, p.481).

¹⁶ “Loose stools” (i.e. “outflow of undigested food”) is associated with the pancreas in SW-29 (Unschuld, 2011, Vol I, p.481).

¹⁷ SW-17 has a quaint description of loose stools: “When the granaries do not keep what they store, in this case the doors are not under control.” (Unschuld, 2011, Vol I, p.279).

¹⁸ These signs and symptoms would have been accounted for as follows. When the digestive resources are not transported to every part of the body, this could cause the influence (*chi*) to flow contrary to its normal course, which would account for the abdominal bloating and discomfort, excess gas and loose stools (see p.103).

¹⁹ Unschuld, 2011, Vol I, pp.482-483 (SW-29).

²⁰ Cheng X, 1999, p.32.

²¹ The notion of the “sinews, muscles and flesh” not having the “nourishment” to “live” is associated with pancreas malfunction in SW-29 (Unschuld, 2011, Vol I, pp.482-483); the notion that the “muscles and flesh soften” is associated with pancreas malfunction in LS-10 (Unschuld, 2016, p.198); and SW-10 states that “the correlate of the pancreas is the muscle tone” (Unschuld, 2011, Vol I, p.185).

²² Cheng X, 1999, p.33.

²³ LS-17 states “When the [influence] of the [pancreas] is in harmony, then the mouth can recognize the five types of grain.” (Unschuld, 2016, p.255.) The “influence” of an organ being “in harmony” means that the organ is healthy and hence all its related functions are working well. “Recognizing the five types of grain” implies being able to distinguish all flavours. Therefore the statement means that when the pancreas is healthy, the sense of taste is strong, but when the pancreas is stressed, the sense of taste is weak.

²⁴ SW-10 states that the pancreas’s “splendour appears in the lips” (Unschuld, 2011, Vol I, p.185).

²⁵ Thorens B, 2010.

²⁶ Cheng X, 1999, p.33.

²⁷ LS-60 states that “All diseases are either movements contrary to or movements in accordance with the norms,” and it gives many examples of signs and symptoms that represent a movement contrary to the norms, such as a bloated abdomen, noises in the abdomen associated with a feeling of fullness, unending nose-bleed, cough, discharges of blood in the urine—most of these signs and symptoms being pancreas related (Unschuld, 2016, pp.552-553).

²⁸ Waugh, 2001, pp.74-75.

²⁹ Cheng X, 1999, p.33.

³⁰ Unschuld, 2016, pp.152-153 (LS-8).

³¹ Unschuld, 1986, p.220 (NJ-16). The following sentence is omitted from the extract. “Internal evidence of such an illness is the presence of moving influences right of the navel which, if pressed, respond with firmness and pain.” See p.270, which demonstrates that this “abdominal diagnosis” is theoretical only and does not apply in reality.

³² Unschuld, 2011, Vol I, p.108 (SW-5).

³³ Collins, 1991

³⁴ SW-17 states “When the speech is feeble and when it takes an entire day before he speaks again, this is [influence] deprivation.” (Unschuld, 2011, Vol I, p.279).

³⁵ LS-10 describes the path of each meridian, then describes the signs and symptoms that may result when each meridian’s associated organ is stressed. These include pains at various locations, following the path of the meridian; and in many cases even states that the toe or finger that the meridian ends at may be “useless”; i.e. either too weak or too stiff or painful to be used. In the case of the pancreas, the signs and symptoms include “the stomach duct aches, the abdomen is swollen.... a feeling of tension and pain below the heart... the inner side of their thighs and knees are swollen... the big toe is useless.” (Unschuld, 2016, pp.176-184). And LS-13 also describes the path of every meridian and the “diseases” of each meridian; i.e. the signs and symptoms that might occur along the meridian when a “blockage” occurs, or when its associated organ is stressed in some way. (Unschuld, 2016, pp.225-238).

³⁶ NJ-16 associates “a tendency to ponder” with pancreas “affliction” (Unschuld, 1986, p.220).

³⁷ Unschuld, 2011, Vol I, p.189 (SW-10).

³⁸ Unschuld, 2016, p.390 (LS-37).

³⁹ Unschuld, 2011, Vol I, p.108 (SW-5).

⁴⁰ Unschuld, 2011, Vol I, p.57 (SW-2).

⁴¹ Unschuld, 2011, Vol I, pp.480-481 (SW-29).

⁴² Leggett, 1994, p.29.

⁴³ Unschuld, 2011, Vol I, p.188 (SW-10).

⁴⁴ Leggett, 1994, p.17.

⁴⁵ Leggett, 1994.

⁴⁶ The *Nei Jing* theory to explain numbness is described in SW-34, as follows “When the [constructive influence] is depleted, then this results in numbness. When the [defensive influence] is depleted, then this results in a loss of function. When both the [constructive and defensive influence] are depleted, then this results in numbness together with a loss of function,” (Unschuld, 2011, Vol I, p.531). It should be noted that “constructive influence” is sometimes regarded as being synonymous with “blood”; see p.185.

⁴⁷ SW-40 states “The disease is named blood decay. It is acquired in younger years either because of a massive loss of blood ... and the liver is harmed. Hence, the monthly affair is weak and diminished and fails to arrive,” (Unschuld, 2011, Vol I, p.601).

⁴⁸ Leggett, 1994, p.28.

⁴⁹ Unschuld, 2011, Vol I, p.156 (SW-8).

⁵⁰ Unschuld, 2011, Vol I, p.372-376 (SW-21).

⁵¹ Unschuld, 1986, p.347 (NJ-31).

⁵² Maciocia, 1989, p.111; Cheng X, 1999, p.39. (It should be stated that in editions of my own book previous to June 2017, I also followed this tendency set by today’s Chinese medicine textbooks—until I had thoroughly researched the *Nei Jing* and *Nan Jing*.)

⁵³ SW-43 associates “vomiting liquid” with illness in the pancreas (Unschuld, 2011, Vol I, p.643). LS-10 associates “food ingested will be thrown up again” along with “the stomach duct aches” with illness of the pancreas (Unschuld, 2016, p.183). It is notable that these signs and symptoms are associated with the pancreas. This is perhaps a result of the *Nei Jing* tendency to consider the stomach and pancreas jointly. However, it should be stated that the attribution of many of the signs and symptoms in this bullet list to the

stomach, is a practice of today’s Chinese medicine, informed by the knowledge of contemporary anatomy and physiology.

⁵⁴ SW-23 states “When the [influence] in the five [*yin* organs] have a disease.... In the stomach it causes [influence] to move contrary to its regular course, it causes hiccup,” (Unschuld, 2011, Vol I, p.402).

Chapter 5

¹ SW-13 states “People in antiquity lived [simple lives]... Internally, they knew no entanglements resulting from sentimental attachments, externally, they did not have [the stresses of today]. In this peaceful and tranquil world [they did not get seriously ill]. The people of today are different. Anxiety and suffering encircle their interior.... Also, the people have lost the knowledge how to follow the four seasons... This is why minor diseases inevitably develop into serious problems” (Unschuld, 2011, Vol I, pp.219-223). And SW-14 states “If cravings and desires have no limits, if anxiety and suffering find no end, the essence [influence] will be destroyed, the [constructive influence (*ying chi*)] is impeded, and the [defensive influence (*wei chi*)] vanishes. Hence, the spirit leaves and the disease does not heal” (Unschuld, 2011, Vol I, p.238).

² NJ-16 associates “a tendency towards tidy appearance” and “an inclination to become angry” with liver “afflictions” (Unschuld, 1986, pp.219-220).

³ LS-66 states “Rage harms the liver” (Unschuld, 2016, p.611).

⁴ LS-47 associates the following states with a heart condition: “[people] suffer from vexation and tend to be forgetful. They have difficulties to open their heart and say something... They are made to fear by someone else’s words” (Unschuld, 2016, p.450). And LS-34 associates the following with heart conditions: “The heart is vexed with closure and [the person is speechless]. Patients

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