

THE EXTRAORDINARY FU (2003)**brain, marrow, bones, mai, gallbladder and uterus.****Monkey Press. Claude Larre, Elisabeth Rochat de la Vallée**

[In this .pdf file; THE BRAIN. pp. 38-89].

[**AcuCentre Editorial Note:** In all four .pdf files on The Extraordinary Fu, the content, style and presentation of Larre and Rochat's excellent book is retained virtually in its entirety. The exception is that most Chinese characters are excluded. For these and all other original and complete content, the reader is urged to refer to the original text.]

THE BRAIN 腦 NAO

Elisabeth Rochat: The radical for nao is number 130, which is on the left of the character and indicates a part of the body or flesh. On the upper right hand side we have head hair, and below that a sort of box with something inside. This is a representation of the human brain, so the whole right side shows a hairy head! Perhaps the cross inside the skull represents the marrow. In ancient Chinese script the character for brain did not have the flesh radical but another graph which indicated the symmetrical structure of the brain in its two halves. But by classical times the radical 130 was in use. (See Wieger's Chinese Characters, Lessons 40A and 40B.) So you have the invisible marrow of the brain inside the bones of the skull, and you have the visible hair. If you remember that hair is sometimes thought of as a super-abundance of blood and essences, you can see the relationship between a brain correctly irrigated and nourished by the essences of the five zang, and the beauty and length of the hair. This is just to explain why the image for hair appears in the character for brain. You do not think with your hair, but with your brain, it is a question of essences.

Claude Larre: If you have your natural hair that is better than buying it in a shop, even if the quality is less good! When you look at someone's hair you are looking at their personality which is expressed through the hair.

Elisabeth Rochat: In the description of the meridians in Ling shu chapter 10, this character nao appears only in the pathway of the bladder meridian starting at the level of the inner canthus of the eye and rising up to the top of the head where it enters and takes a special relationship, *luo*, with the brain. This *luo* is the same character as used for the network of relationships for the circulation of *qi*. After this, the text continues to say that the current of *qi* comes back and leaves the brain, going down to the nape of the neck. We find the same movement and relationship between the brain and the governor vessel, *du mai*, and there is a description in Su wen chapter 60 which says that the *du mai* has the same trajectory as the bladder meridian. It starts at the level of the inner canthus of the eye and rises up crossing the forehead and reaches the top of the head where it enters the brain.

If we look at Nan jing difficulty 28 we have a description of the *du mai* which is more usual. It starts at the perineum area and rises up following the spinal cord to the head. In this description the text says the *du mai* arrives at the level of *Du mai 16*, (*fengfu*), and enters the brain with a *shu* relationship. *Shu* represents the idea of belonging to something, to adhere to or depend on something,

like a vassal with a lord, where both servant and lord are of the same country or area. In the description of each of the twelve meridians this relationship of belonging is the special connection between a meridian and its viscera, and the luo relationship is the special relationship with the coupled viscera, for example the tai yin of the hand, the lung meridian, with the yang ming of the hand, the large intestine meridian. The relationship of the du mai with the brain is both luo and shu, it depends on the direction. When it is in a descending trajectory it takes a luo relationship, but when it is ascending it takes a shu relationship. It is exactly as if the du mai is the link to the brain in all ways. The bladder meridian is the tai yang, and du mai is the master and origin of all yang in the body. The head is the place for the yang meridians. Only the liver of the yin meridians reaches the top of the head, having crossed through the brain, and the heart meridian reaches the inner eye, which connects to the brain. The skull, which is the envelope of the brain, appears to be the great reunion of yang qi. This is quite normal because yang qi rises up to the top.

SU WEN CHAPTER 81

Elisabeth Rochat: If we look in Su wen chapter 81 we have a definition of the brain: 'the brain is yin'. We see for the first time the duality of this extraordinary fu. The double aspect of the brain or head is that it is like a lid over something containing the essences, it is a place where all the vapours, yang qi and essences gather and are retained. But it is also a place for communication.

It is like a partition wall, which is not exactly a separation. The influx of heaven is in free communication with all this area of the body. The brain is the end point and junction point for all yang qi, and it is just at the base of the skull that you have the special point for the junction of all yang qi, Du mai 14. But the brain is also a qi heng zhi fu, for storing essences, and it is yin.

We should remember this passage between yin and yang which is associated with the notion of heng, of continuity and harmonization. I think that all the qi heng zhi fu are like a powerful synthesis at the level of yinyang.

Question: Are the essences the material side of the building of life or the invisible side of it?

Elisabeth Rochat: Both. They are the mechanism for building life and the power to enter into one's own pattern. But you also need to have materialised viscera and to have blood and water and flesh and marrow. At every level you have both physical and invisible sides. You also have to look at the context of each text and see with which other characters the essences are coupled.

Claude Larre: For example jing shen and jing qi. Jing shen expresses the quality of life which is shining in people. So by virtue of the essences which are very well composed within oneself the shen can express themselves. But at the same time if the essences were not sufficient for circulation than you would grow weaker and weaker, and there would be no joy or interest in life. With the qi, this may be derived from breathing, eating or anything which comes to you through the essences in order to renew the power of your life. You may say that your jing depends on all the visceral contribution which are the nutriment given in the form of qi but that qi could not really be assimilated if the essences were not there to give a proper form to them. Before you receive them they are good and suitable for everybody, but when they enter you they are turned into something to invigorate your own particular life. A crude distinction would be to say that in the case of jing shen the shen are

radiating out from the essences, but that is not true of jing qi. Jing plays the same role in all circumstances, to fix or stabilize the shen in order to give them the possibility of expressing themselves.

SUWEN CHAPTERS 16 AND 17

Elisabeth Rochat: These two texts are not specifically about the brain but the whole head. The character for head is tou.

I will summarize chapter 16. It happens sometimes that the five zang are put in relationship with other realities related to six, for example six parts of the body, in which case something appears in the sixth position. In the Nei jing this is never a sixth zang but something such as the heart master, xin zhu. It is something like a special place or passage, it depends on the context.

In Su wen chapter 16 we have a correspondence of each of the five zang with two months of the year. Of course we lack one zang for this, and instead we have the head. During the fifth and sixth months of the year the qi of the human body is working particularly at the level of the head because it is rising up with a strong impulse in accordance with the qi and warmth of the surroundings. The head is not separated from the zang in this way, it is in a set with them, like the final point of the ascending movement of life.

In chapter 17 we have something more precise:

‘The five zang are the powerful force of the body. The head (tou) is the fu of the radiant essences (jing ming). When the head is disturbed the vision fades, the vital spirit (jing shen) is deprived of force.’

Jing ming is translated as radiant essences. Ming suggests radiation, an emanation which is full of life and is often found in the expression shen ming. Ming is the inner light coming from the spirits which are kept deep in the heart and are able to illuminate all of life and ensure its good direction in each part of the body. It manifests itself through the appearance of each person. If they are able to keep their spirits inside their heart and allow them to radiate everywhere through all the other zang, their circulation is well made and therefore their complexion is good, and the light in their eyes is perfect. So this ming, the luminous radiance, is in a couple here with jing, essences. We can see how all the yang qi, which supports and conducts the spirits, rises up to the head and makes the reunion and junction at that level. We can see on the other hand how the purest essences of the organism rise to accumulate at the level of the brain. Therefore the head or the brain is the junction place of essences and qi. For this reason at this level we have the finest sense organs which are involved with what is most refined and with what is not tangible. Odours and sounds and vision are very fine and subtle and all these operations need the spirits through the junction of essences and qi.

In Su wen chapter 81 and Ling shu chapter 80 this is stated clearly, particularly for the eyes. The essences and spirits coming from the five zang and six fu rise up to the eyes in order to make vision, and to radiate the interior light through the pupil. Remember that the first point of the bladder meridian is jing ming. The first character jing is not the same jing as in essences, it has the eye radical on the left hand side instead of the grain of rice. Their common part is the green colour of life on the right hand side. It is the colour of the sap rising up through vegetation and the correct rising movement of

essences in a human being. Because all these essences come up to the eye from the five zang and six fu, the eye is able to grasp the finest essences and to be penetrated by the power of the spirits through the special relationship with the heart and its meridian. It also benefits from all the yang meridians which are so abundant around the eyes. Thus the eye is able to fulfil all the functions of vision, and make distinctions and judgements. This comes from the spirits and the heart. It is through the presence of the spirits within the eyes, that you have the power of emission from your own eyes to those of another person. The eye is a very useful image to understand this connection at the level of the brain. The brain is the gathering together of essences and qi allowing the presence of the spirits, and enabling the sense organs to work at the highest level. Many commentators underline the fact that the seven upper orifices can only work well if the spirits are present. From this we can understand that all mental and subtle sensory activity is made through the jing ming, through the essences penetrated by the power of the spirits coming with the qi and illuminated by the essences which are not like a mass or liquid, but are penetrated with qi and shen.

We can see the same thing in a quotation from a book of the 16th century AD by Li Shizhen, the Bencao gangmu. Here we find another definition of the brain: 'the brain is the fu of yuan shen. Yuan is the origin and shen spirits. Perhaps the brain is the fu where the spirits from the heart enter into composition and conjunction with the essences and qi coming from the origin, and are able to achieve the finest and highest activities of the human being at the level of the head. So we have the relationship with the kidneys via the spinal cord and the relationship with the heart through the trajectory of the heart meridian from the centre of the heart to the inner circulation of the eye within the brain. It is also at the face and head that you can see the finest aspect of the circulation of blood and qi in the form of the complexion. All changes at this level are information about blood, qi and shen through the essences penetrated by this illumination.

If you are at the highest level you have only the purest qi and essences because the filtering process has worked correctly. Many diseases at this level are caused by invasion of the unclear: phlegm, damp and so on. You can have headaches coming from these impure substances clouding the head. The Su wen even mentions using eye diagnosis to see not only the eye but the spirits, and through that the zang in the inner part of the body.

Question: What does the sentence 'All the energy pathways are dependent on the eye' mean in Su wen chapter 10?

Elisabeth Rochat: The meaning is that all the yang pathways (as well as the liver pathway which passes behind the eye and the heart meridian which arrives at the level of the inner eye) form a star around the eye and bring to it this very rich qi. With this qi they also bring the fluids and liquids (jinye) which are necessary for good nourishment of the inner eye. And because the eye is like the sun, it is a centre of radiance, not only for vision but also for the circulation of qi through all these meridians. We can see this in the circulation of the defensive qi (wei qi). During the day it is always from the eyes that the wei qi circulates in the yang meridians and at the superficial level of the body. We will see this when we look at the vital circulation, the mai. Bladder 1 is the important starting point of this circulation of wei qi during the day and the starting point of one part of the governor vessel, du mai and of tai yang, according to Su wen chapter 60 and Ling shu chapter 10.

SU WEN CHAPTER 17

Elisabeth Rochat: This text gives a definition of jing ming:

'Jing ming: by that we are able to see the ten thousand beings, make the differentiation between what is black and white and what is short and long.'

If you are unable to distinguish colours or the size of objects it is a sign that your essences are declining. Through the heart and liver meridians shen and hun are present at the level of the upper orifices and the brain.

This quotation presents the two sides. You have the correctness of the vision depending on all the mechanical apparatus of the eye, but also of the spirit. Other quotations from the Su wen and Ling shu are similar. If you have problems with your vision it is a sign that essences are not sufficient or not of good enough quality, and not penetrated enough by the spirits to allow this luminous radiance.

LING SHU CHAPTER 28

Elisabeth Rochat: In Ling shu chapter 28 we have a description of the special conduction and transmission of the ye liquids to the top of the body at the level of the eyes. The eyes are presented as the place where a lot of the vital circulation accumulates, and because all this network of animation comes together in this place the ye, the concentrated, dense, bodily liquid, goes up to that area and the brain. The ear is also presented as a place where a lot of vital circulation gathers together. Because vital circulation, the mai, brings the ye liquids to the eye, when there is sadness coming from the heart there will be tears. But you have to take care not to cry too many tears, because you can dry up your eyes, and through that lose essences at this level.

At the end of this chapter we have a presentation of the extraordinary perverse influences, qi xie, which are able to go to the orifices particularly of the face and head. The text says that in this case, if the perverse qi is able to invade this area of the body it is because the normal qi is not enough. When the qi in the highest part of the body is insufficient, the brain is not impregnated enough to make its fullness. As a result you have buzzing in the ears and trouble with the vision.

LING SHU CHAPTER 80

Elisabeth Rochat: The relationship between the brain and the upper orifices is very strong. In Ling shu chapter 80 the relationship between brain and eyes is emphasized. At the beginning of this chapter we have a description of the eye and of the five parts of the eye following the five zang. After this description we have the following text:

[The essences of the five zang which make the eye and the eyesight] rise to depend on the brain, and behind they appear in the middle of the nape of the neck, take advantage of an emptiness in this part of the body, and enter deeply inside it. Then they follow the connective systems of the eye, mu xi and enter the brain. Having penetrated inside the brain, they cause vertigo (literally 'brain spin', nao zhuan). In this kind of vertigo, the connective system of the eye is contracted, leading to visual disturbance.

When the perverse qi affects the essences, the essences of the five zang cannot remain in good association (at the eye) and they dissipate. When the essences dissipate, the eyesight is no longer good and one sees double.

The eyes are the essences of the five zang and six fu, the regular places of nutrition and defence, of hun and po; it is there that the spirits appear.

Thus, when the spirits are exhausted, hun and po dissipate, will and intent (zhi yi) create disorder.'

This is not exactly about the brain but the brain is presented as having a very close relationship with the eyes and the inner system of the eyes. If the essences of the zang and fu and all the spirits and qi are necessary for the good functioning of the eyes, we can understand that all these operations are made at the level of the brain. Commentators say that jing ming is necessary for vision. The spirits are of course especially present at the level of the eyes because the eyes are the messenger of the heart.

LING SHU CHAPTER 21

Elisabeth Rochat: In this quotation we have the bladder meridian, the tai yang of the foot, taking a dependent relationship with the root of the eyes and afterwards penetrating the brain.

'The tai yang of the foot is in free communication with the nape of the neck and penetrates into the brain. It directly takes a dependent (shu) relationship with the root of the eyes (mu gen), which is called the connecting system of the eye (yan xi). If the head and eye have sharp pains one needles the middle of the nape of the neck between the two muscles. It penetrates to the brain and separates into yin qiao and yang qiao. Yin and yang meet (jiao), the yang penetrates the yin, and the yin comes out of the yang. There is a meeting at the external corner of the eye (the text here is usually corrected to the internal corner of the eye at Bladder 1). When the yang qi rises in power then one opens the eyes. When the yin qi rises in power then one closes the eyes.'

We saw earlier the relationship between the brain and du mai and now we have the special communication between yin and yang qiao mai which occurs at the level of the brain as well. Because of that we can say again that it is the conjunction of yin and yang which is most important. Here we also have the area of jing ming, Bladder 1, as the projection of the junction between the yin and yang qiao mai in the inner space of the brain. You know about the connections between the yin and yang qiao mai and the defensive qi, and the good rhythm which each human being has to have between day and night, activity and rest, waking and sleeping. That is also a way to see this conjunction of yin and yang within a time scale. When it is time to wake and get up the yang dominates, and everything is functioning at the yang level. Then when it is time to go to bed and rest what was at the yang level circulating at the superficial level enters into the yin. The yang penetrates the yin. This is exactly the image of the circulation of defensive qi.

These two extraordinary meridians have a special relationship with the foot shao yin, kidney meridian and the foot tai yang, bladder meridian. In a way tai yang represents the most developed state of qi, and shao yin represents the depths and mastering of water, essences and blood. So in these two meridians, the yin and yang qiao mai, we have the coupling of yin and yang and jing and qi. For this reason yin and yang qiao mai master communication between yin and yang.

SU WEN CHAPTER 10

Elisabeth Rochat: This chapter contains the following sentence: 'All the marrow (sui) is dependent on (shu) the brain (nao).'

'Dependent on' indicates that the nature of brain and marrow is the same. When the hand tai yin, lung meridian, takes its dependent relationship with the lung itself, their qi is of the same nature. When it

takes a lu relationship with the large intestine, it is because they are not of the same nature but are able to bring something to each other. The marrow returns to the brain as if to its natural place of life. The marrow is in its own element there, and the relationship of brain and marrow is found in a lot of texts. The brain is the sea of marrow, and they are often together in pathological processes. For example, this is seen in Ling shu chapter 30.

LING SHU CHAPTER 30

Elisabeth Rochat: In this chapter the Emperor asks Qi Bo the definition of what are called essences, qi jin, ye, blood and mai. Qi Bo answers that he knows that all of them are only one qi but with six different names. He then gives an explanation and presents each of the realities. The definition of essences is just as we saw earlier, that when two spirits interlock a new body is constituted, and what comes first is called essences. Afterwards in the text there are definitions of qi, jin and ye. For the ye it says:

'The grains enter and the qi is impregnated with fullness (man). There is a saturation, a fertilization and an overflowing of power concentrated in the bones. The bones have under their authority the movements of extension and flexion. Through flowing and fertilization there is tonification and an increase of the power of the brain and marrow. The layers of the skin are moistened and lubricated. This is called the ye.'

In the second part of the chapter we have a special pathology linked to the six realities:

'When the ye are extremely exhausted, the movements of extension and flexion which are under the authority of the bones, are no longer carried out with ease. The complexion withers. Brain and marrow are exhausted. The legs are impotent and there are noises in the ear.'

LING SHU CHAPTER 36

Elisabeth Rochat: This text says the same thing:

'When the essences and the ye coming from the five grains are in harmonious composition they make a kind of rich paste. This rich paste seeps into the internal parts and penetrates the hollows of the bones. It tonifies and increases bones and marrow. It descends and flows to the thighs and especially the inner and supple part of the thighs close to the sexual organs. When yin and yang are not in good harmony the ye flows out and goes down to the yin part of the body and may leave the body through seminal or vaginal discharges. In this case marrow and ye diminish, and if they decrease too much there will be an emptiness which leads to pain in the lumbar region and the legs can no longer work correctly.'

In this text we see the community between bones, marrow and brain, because they are all concerned with the irrigation coming from essences and the bodily liquids full of essences. All this is also linked with the power of the kidneys. The essences and ye have to rise up to the top of the body, but if they do not and everything is descending, then you lose the circulation of essences and you get symptoms of pain in the lower lumbar region or impotence and weakness in the legs.

Question: What characters are you translating as 'rich paste'?

Elisabeth Rochat: It is just one character, gao. Paste alone is not enough of a translation. The bottom radical is the same as in the brain, radical 130, a part of the body. Above this the ideogram gao has the meaning of superior, to be in a high position. This kind of rich paste or creamy grease is the

description of the first appearance of an embryo given in Huainanzi chapter 7. So gao is full of essences and vitality and concerned with the original structure of the being.

LING SHU CHAPTER 52

Elisabeth Rochat: We can now look at two chapters where the brain appears in a set of four entities. One is quite well known, the four seas of Ling shu chapter 33, while the other, Ling shu chapter 52, is less known.

'The qi of the thorax (xiong) has a thoroughfare (jie). The qi of the abdomen (fu) has a thoroughfare. The qi of the head (tou) has a thoroughfare. The qi of the legs has a thoroughfare. So when the qi is in the head it stops at the brain. When the qi is in the thorax it stops at the lateral areas of the chest (ying) as well as the shu points on the back. When the qi is in the abdomen it stops at the shu points on the back and in chong mai, the mai which beats to the left and right of the navel. When the qi is in the legs it stops at the thoroughfare of qi, qi jie (Stomach 30), as well as at cheng shan (Bladder 57), and above the malleolus, going towards the lower part.'

As far as the brain is concerned when the qi is in the head it stops at the brain. It stops but it is not blocked. It is just like a station where it stops being well-conducted, because the meaning of a thoroughfare is a place which you pass through. The brain is the thoroughfare for the qi of or at the head. It is hard to put into English. It is a place where everything which rises up to this level accumulates. Thoroughfares are used for free communication and the brain is used for free communication of marrow throughout the body. The function of the brain is not only located in the skull but radiates, particularly through the marrow. Thus Ling shu chapter 52 calls the brain a thoroughfare.

In the commentators we find the point Du mai 20 as the meeting point for all yang qi.

LING SHU CHAPTER 33

'Mankind has a sea of marrow, a sea of blood, a sea of qi and a sea of liquids and grains. This makes four, corresponding to the four seas.'

Elisabeth Rochat: There are seas in the brain, in chong mai the middle of the chest and in the stomach. This is not exactly the same presentation as in Ling shu chapter 52, but there is something in the brain, the middle of the chest and thorax, the chong mai and the stomach. So we have important places in the body, and one is in the lower part of the abdomen, another in the trunk, one in the chest and one in the brain. We can also recognize the three dan tian or the three ancestral zong. The zong jin, the ancestral muscle, is located in the lower abdomen, the zong qi, ancestral qi, is located in the chest, and the zong mai, ancestral mai, is in the area of the eyes.

The text goes on:

Huangdi: "This goes a long way! You make the connection (he) between mankind and the four seas of heaven/earth. Could I ask you how you establish the correspondence?"

Qi Bo: "First of all one must perceive and locate the yin and yang, the biao li, the ying and the shu points, in order to determine the four seas."

Huangdi: "And how do you determine them?"

Qi Bo: "The stomach is the sea of liquids and grains. Its points are above at the thoroughfare of qi (qi jie, Stomach 30) and below it reaches san li (Stomach 36). Chong mai is the sea of the twelve meridians. Its points are above at da zhu (Bladder 11) and below it comes out at the superior and

inferior face of the great void (Stomach 37 and 39). Tanzhong is the sea of qi. Its points are above the pillar bone (Du mai 14 and 15 or Bladder 10) and in front at ren ying (Stomach 9). The brain is the sea of marrow. Its points are above at the canopy (Du mai 20) and below at feng fu (Du mai 16)."

The thoroughfares of qi are for free circulation, for the ascending and descending of meridians, qi, essences and blood. Seas are for concentration. They are reservoirs for what circulates through the thoroughfares. In nature you need rivers and seas; rivers flow to the seas and seas evaporate forming clouds which in turn feed the rivers, so there is a circulation.

Studying the brain, we find the same relationship with marrow. The name of Du mai 20 is not given in the Ling shu, only feng fu, Du mai 16. Du mai 20 is referred to only as the canopy, gai. To be a canopy is an exact description of the skull which is hollow and holds the brain. One commentator says that it is because the skull is the biggest hollow of bone in the body that it receives the marrow inside it and can be the sea for all the marrow. The character for canopy (gai) is also a name for the lungs. Ren mai 20 is called flower canopy (hua gai). A canopy is able to attract and receive the influence coming from heaven. In ancient China this was the function of a canopy. If you have a hat, it is a little canopy, and an important person has a great canopy. The Emperor has the greatest one! You have to attract the beneficent influences coming from above, and you have to attract as much as you are able to, so the Emperor has a great big canopy because he is capable of receiving powerful influences coming from heaven and redistributing them to his people. The lung has the same movement as heaven inside the human body. It distributes the qi, and makes it descend. At the level of the brain, through the form of a canopy and the situation of the skull, we have the penetration of all the influences coming from heaven. Thus the names of the points in this area are very important, particularly one or two on the bladder meridian. For example, Bladder 7 is tong tian, free communication with heaven. So the brain is a place of junction and communication between what rises up from the kidneys as essences and liquids and what is descending from heaven and seeping through the human body. Some commentators emphasize this situation. Zhang Zhicong said that the sea of marrow is in free communication with heaven above, and in free communication with rivers and streams below. The Chinese expression for rivers is playing with meanings because it is made with the character for water (shui) and the character for meridian (jing), but meridians are also just great currents of water on the surface of the earth. You are unable to distinguish what is in the body or on earth because it is the same current of water or qi

A final point is that these thoroughfares of qi in Ling shu chapter 52 are obviously for the complete achievement of human bodily form. We know that in the ancient image of China there were four seas for the four directions. They were like a reservoir for each quality of qi: north, south, east and west. Some commentators said that the canopy, which is the bones of the skull, is also the place where the achievement of the constitution of the body is visible because the fontanelle, which is open when the child is born, little by little closes up. Therefore they gave Du mai 22, xin hui as a point to govern the marrow. The meaning of hui is a meeting place, a place where a lot of things coming from different directions meet. Xin has two ways of being written. On the left there is part of the character showing the skull with the brain inside. On the right hand side of this character is the head. The whole character means the bone which is in the interior part of the top of the head, or the anterior fontanelle.

In Chinese this is a common term to designate all fontanelles. But sometimes you can add the heart radical underneath the skull. This is then very similar to the character si, thought, the special quality of mental activity linked to the spleen. When thinking just goes round and round it becomes obsession. But if all the spirits coming from the five zang are in good movement then thinking should not just turn around. The etymological explanation for si is that the vitality coming from the heart is in free communication with the brain and the skull. So we can see that the ideograms for the brain or fontanelle and for thinking have a very similar etymology. Some commentators say that you should not puncture Du mai 22 before the age of eight. Eight is the first stage of development for a man according to Su wen chapter 1, and it is the age where the qi of the kidneys has special power and fullness.

After the presentation of these four seas, Ling shu chapter 33 gives the pathology of each of them. The pathology is divided between excess and insufficiency.

'Excess of the sea of marrow: one is alert and robust with a lot of strength, one fulfils abundantly the number of years allotted. Insufficiency of the sea of marrow: the brain turns around (vertigo) and the ears buzz, the legs are weak with a kind of paralysis (jing wei) and one has visual disturbances. The eye can no longer see. One is slow and lazy and likes to lay down quietly.'

Insufficiency of the sea of marrow is a deficiency of essences and of the radiance of essences at this level. The brain spins and you are unable to keep your equilibrium. You have feelings of vertigo. In Chinese classical vocabulary there is a difference between when the head turns and when the brain turns. It is either simple vertigo for the head or something deeper and more serious for the brain. I think it is because the essences are not strong enough and you cannot keep your firmness and strength. The first effect is at the level of the brain manifesting as a lack of equilibrium. Then there is disturbance at the level of the two upper orifices, the ears and eyes. The ears buzz and there is visual disturbance. At the same time the legs are paralysed due to the lack of irrigation in the muscles, so you can see that the brain is not only acting in the skull but in every place where marrow has to be strong. If the eyes can no longer see this is quite serious and could lead to blindness. There is a lack of light or luminous radiance at the level of this orifice which is the cause of the blindness. If the essences are insufficient there is no support for the spirits or the qi. The person becomes slow and lazy and wants to lie down because the marrow and bones are weak. If the marrow is not strong enough, due to the sea of marrow being insufficient, the bones cannot be firm and solid. It is impossible to be at ease standing upright. Also, you cannot think because your brain no longer has the ability.

If you look at the description of an excess of the sea of marrow the characters used do not seem pathological. But Su wen chapter 1 gives a presentation of the lives of men and women with the rhythm of eight and seven years respectively. This rhythm highlights the time when a man or woman can make another life, their time of fecundity which is in resonance with the kidneys and the power of their qi and essences. Huang di asks about exceptions, and Qi Bo says that there is the rule but that not all individuals follow it. There is the law and the surplus. He explains that the exceptions have particularly great and strong vitality, and that their qi is in free communication and circulation. The kidney qi is said to have a surplus. But the norm remains the norm. It is the same sort of thing here

with an excess in the sea of marrow. It is like a natural gift which is greater than the norm. The people with this excess are robust, alert, vivacious and clever even at a very old age. So again we can see that the brain, the sea of marrow, is in a very close relationship with the kidneys and the natural celestial gift to each individual.

Question: What about the relationship between the brain and thinking?

Elisabeth Rochat: There are no old texts which are clear on this relationship. But we know that the heart meridian has a direct connection between the middle of the heart and the inner connection of the eye which is part of the brain. This is described in Ling shu chapter 10. The connection is two-fold because it is made once through the trajectory of the meridian of the shao yin of the hand, and another time through the luo at Heart 5, tong li, which from the middle of the heart has a connection with the root of the tongue and then takes a relationship of dependence with the inner connection of the eye. In this quotation the phrase 'from the middle of the heart' is full of meaning because it is the void which is the dwelling place of the spirits.

Perhaps the clearest explanation is in Su wen chapter 17. The presence of jing ming (the radiance of the essences) means that the essences are in the brain, and the purest qi and essences are in conjunction making a welcoming place for the benevolent influence of the spirits, in order to produce the finest effects of human life by means of the sense organs and all the process of thinking. The link between the heart and the brain at this level is certain, but in all these old texts the psychological, intellectual or spiritual life is always found in relationship with the heart. There is no text which says that thinking or the emotions belong to the brain. I think that being the junction of what is purest is the important point about the brain. If you are in relationship with essences and have the presence of the spirits you are a mirror of the junction between essences and spirits, which is the highest level of vitality and allows all the most refined activity, such as thinking. But it is never said that the brain is the dwelling place for the jingshen.

The heart is the deepest and most important dwelling place for the unity. It is the residence of the spirits and the place which attracts the special concentration of essences coming from all the other zang. The heart is also the master of the psychological world, the emotions and sentiments, so it is also master of the upper orifices and sense organs because, acting as a master, it has to make decisions based on the information coming from outside. We can use this unity in order to have a curative effect for our patients.

The brain and the extraordinary meridians are the prototype for the junction of yin and yang and the harmonization in the depths of the vitality. Therefore there is a junction with the original unity or the unity of the adult which is able to master the jingshen through the spirits of the heart. The brain is perhaps a stage between these two aspects of life. After all, the central nervous system of Western medicine has something to do with the brain and the liver and the heart of Chinese medicine. The brain also has something to do with the good formation and achievement of the person, and it has something to do with cerebral constitution or degeneration.

In occidental thinking we consider consciousness or thinking as something in itself. But there is nothing like that in the old Chinese texts. We have consciousness, thinking, feeling or the whole psychological world as a process, and each Chinese character just designates a movement of this

process which is the movement of qi. It is simply this movement which makes the feelings or emotions and so on. 'Consciousness' implies a good harmonization between essences and spirits at the level of the heart, at the level of each zang and at the level of the brain. In Ling shu chapter 8, where each of the so-called spiritual aspects are presented, what is called thought, si, is just a moment in the process. Pathology in the realm of thought is to stop the process and to be unable to pass onto the next stage, which is the conception of plans. From this perspective the important thing is that nothing comes to disturb the void and the peace. The void and the peace are predominantly in the heart, but they are also in the brain. If something impure invades it, there will be disturbance and disease, so the main treatment for the brain might be to treat the heart, to free up the spirits of the heart in their communication with the brain.

In some texts such as Zhuang zi we have the expression ling fu. Nobody knows exactly if this expression designates the brain or the heart. Fu is a depot, which we know, and ling is spiritual influence or benevolence. So ling fu is the place in which, or the mechanism by which, the most subtle essences can be joined together for the radiating effect of the spirits. Nothing unclear must come to disturb or obstruct the spreading out of this internal spiritual force. If you look at the use of this expression in the Treatise on Painting it is considered the source of inspiration for the artist. Claude Larre: When we are speaking of ling we are not speaking of shen. We are talking about the revelation of shen. If you say that the heart is the place where spirits dwell, it would be normal to say that the expression of the shen is not in the heart but is made through the face, the tongue or the body. But between the places where the expression is made and the source of that expression, there might be an intermediary place, which could be the brain. So the brain would be the first revelation of the heart, and the most exterior revelation of the brain and heart would be the orifices on the face. The Chinese like to express life on three levels, so it might be that the most spiritual part of our life is the dwelling of the spirits in the heart, and the most exterior testimony of the spirits is our own activity. This activity is made through our body, and through the messages we send out and the connections we make with the ten thousand beings around us. But between those two things the functioning of a personal human life is the way to convey what is produced at every moment in the obscurity of the heart. Between the inside, nei, and the outside, wai, there is a place for something, and that could be the brain. If we have the qi heng zhi fu, permanent, perennial and extraordinary fu, we have the foundation for life, and where would the brain be inside this set of six? Most probably it would be in the first place where the heart is helping to send out what is concealed within itself. So with ling fu there must be a storehouse where the revelation of the heart is available for closer observation outside. Ling tai, an expression with the same ring, is another perception of this special relevance. Tai is a terrace where things are exposed to heaven. So when the spirits come from the heart they may at the same time receive help from spirits coming from heaven, and the junction place for this would be a terrace. This was seen in the life of ordinary Chinese because in springtime they would ascend to places where they could see the sky and the moon and they would sit waiting for the new year, drinking and celebrating and being ready to receive some sort of blessing from the spirits. We know from archaeological finds that this was the case.

Elisabeth Rochat: Ling tai is the name of the point of du mai at the level of the heart (Du mai 10), very near to the other point shen dao, the way of the spirits.

We saw that the brain stores essences coming from the kidneys and the origin, but essences are always renewed through nourishment and the work of the stomach. Several texts, such as Ling shu chapters 22 and 52, describe this ascending movement of essences from the stomach, and the qi going up to the lung and the hollows and orifices of the face and the brain in order to reinvigorate and renew the essences at that level. We can explain this by the transmission of the fluids, ye, at the face and in the orifices connected to the brain, or by saying that the qi from the stomach rises up to the lung and the orifices and the brain. We must never forget that when we speak of essences we are speaking of the essences of posterior heaven coming from the assimilation of exterior things (food and drink) and following the pattern of the essences of anterior heaven. If your stomach is in a bad condition your brain and all your zang and fu will be in a bad condition.

SU WEN CHAPTER 81

Elisabeth Rochat: We have a definition of the brain as yin here.

'Nasal secretions and tears are (from the same substance as) the brain. The brain is yin, and the marrow is what is able to ensure the power and strength of the bones. For this reason when the brain oozes we have nasal secretions.'

This means that because we have tears and nasal secretions we can see that the substance which forms the brain really comes from yin, from essences and liquids. If these substances flow out too much you will suffer a lack of essences at the level of the upper orifices and the brain. But you also have here the affirmation that these upper orifices really are in complete free communication with the brain and its substance.

SU WEN CHAPTER 52

Elisabeth Rochat: In Su wen chapter 52 we have a short quotation:

'If one punctures the head at the level of nao hu, Du mai 17, and if one penetrates the brain it will be immediate death.'

A hu is a door which is not as big as a gate, men. Men is a great double door, but hu is a single door. Men is a door opening onto something which is in relationship with heavenly power. Hu is used for the same thing connected with earth. In some temples, for instance, the doors giving access to the spirits or the altar of the spirits would be men, but the passages to the altar of the spirits of the earth would be hu. So the door to the brain, nao hu, is a little door for receiving earthly influences and a meeting place for things to penetrate the door. This is a point of communication with the brain. But if you put a needle into the brain you can kill your patient. The commentators on this passage are very interesting. One from the eighth century AD says that nao hu is in free communication with the inner brain. We saw this with the essences of the eye appearing in the middle of the nape of the neck, in Ling shu chapter 80. The brain is the sea of marrow, the centre and point of mastering of the marrow. Here the authentic qi (zhen qi) is concentrated and accumulated. Therefore if a needle penetrates the

brain the authentic qi will flow out and cause death. The reason why the man dies is that his authenticity and his origin, which are accumulated from the kidneys at the level of the brain, escape. Another commentator, Zhang Jiebin, from the sixteenth century said the brain is the sea of the marrow. In it the original (yuan) yang, essences and qi are concentrated and accumulated. This junction of essences and qi which are linked with the original yang can rise up to the top of the body and the brain, because of the purity of the original yang. Therefore, if a needle penetrates the brain, the authentic qi flows out and death results.

Another commentator speaks of the authentic yang flowing out of the brain via this point. So you can see that all the commentators give the interpretation from the relationship of the brain with the origin of the kidneys which is also the origin of the life of a man. The authentic qi, which is the perfect composition of qi following the natural pattern of the individual, is particularly present at the level of the brain.

Su wen chapter 52 mentions many other forbidden points. If you needle the middle of the heart you die after one day, for the liver it is five days, for the kidneys six days, for the lungs three days and for the spleen and the gallbladder one and a half days. And for the brain it is immediately! Of course the numbers are symbolic.

Question: When a person's essences are depleted from birth but they have great clarity of thinking and radiance of consciousness, how is that explained?

Elisabeth Rochat: It is the power of the spirits. Perhaps there are even a few essences that are of good quality. But this is not in medical texts.

Claude Larre: Sometimes just before people die it seems that they have never been so well, but after one or two hours they are gone. Their strength is great, but it cannot last. We say that people are in good health not because they are bright but because they are able to be bright every morning and every evening. Health is a continuing state, it is not a moment.

Question: When you lose essences from the orifices as you described, it seems as if it must deplete you. But sometimes it is appropriate.

Elisabeth Rochat: If it is proper to lose them it is in order to clarify something. In that case it is just like a treatment. You clarify the cause of the disturbance or disorder at the level of the brain or the heart. If not it is because the heart is unable to master the emotions and the zang are unable to close the right doors. For instance, the kidneys might not be able to contain the liquids from flowing out of the eyes, or the heart might be unable to keep the equilibrium and stop the sadness. Then the lung might lift up due to the sadness thus pushing liquids and qi upwards to the top of the body. You can lose liquids in a process of cleansing, for example if the liquids have become unclear, but you are never supposed to lose essences.

PATHOLOGY OF THE BRAIN

Elisabeth Rochat: We saw earlier how the ye liquids were important for the brain and marrow in order to irrigate and invigorate them with essences. Therefore several kinds of hot disease can affect the brain and marrow, especially when the wind and cold of the winter cause disease. At first the perverse penetrates the depths of the body because of a deficiency of the correct qi, and you get cold. But when spring comes the natural movement is to externalize, so there is a struggle between the warm yang qi coming from outside and the cold inside, and this struggle can cause an obstruction. For example it can block the pores and prevent a good circulation of qi at the exterior layers of the skin, causing fevers particular to the springtime in which internal heat develops. This internal heat injures the essences and the yin parts of the body. It rises up to the brain and prevents the liquids and essences reaching the brain and the marrow. There is a description of this in Su wen chapter 35 where it is described as the 'brain and marrow are melted'. The main symptoms of this are intermittent fevers and disturbance at the orifices. The treatment is to restore normal movement of the yang qi towards the exterior. But if too strong a dispersion occurs then afterwards the patient can experience a severe coldness because he is in a state of emptiness, emptiness of yang and emptiness of yin. The yin was already damaged and now the yang has flowed outside.

SU WEN CHAPTER 42

Elisabeth Rochat: In this chapter we have a presentation of diseases caused by wind, feng. Several kinds of disease due to wind are described, for example wind in each of the five zang with specific symptoms, or wind in the intestines. There is also a description of wind in the brain.

First there is the aetiology, which is due to the wind rising up to feng fu, Du mai 16. Feng fu is like a depot for wind, a place where the wind is received.

Usually this point receives the negative influx of wind because it is at the top of the trunk in the superior part of the body. Wind attacks in the heights. Humidity attacks the lower parts of the body. When the qi of the wind rises up to this area, wind of the brain can occur. When wind enters the head and all the systems of connection which are in the head, then wind of the eye results and you can have trouble with vision and so on. The relationship between wind and brain through feng fu at the nape of the neck also connects with other points such as nao hu, Du mai 17, just above feng fu, and feng chi, Gallbladder 20, which is parallel to it. Chi is like a pool, a reservoir of water, with the power of extension. If instead of the water radical you have the earth radical, you have di, the character for earth as it is in a couple with heaven. So feng chi is like a reservoir or sea for the wind. The difference between feng fu and feng chi is perhaps that feng fu is like a depot or place where it is waiting to go elsewhere. A fu is a place where something is taken before going somewhere else. It has the power of a sea to concentrate and make a reservoir, or to act on the wind.

Claude Larre: There is some sort of reservoir and then it expands, because the meaning of chi is a big expanse of something. Names of points are not given without a connection to the treatment given.

Elisabeth Rochat: One stage above the level of feng fu and feng chi, the penetration and mastering of the wind, you have Gallbladder 19, nao kong, brain hollow, and Gallbladder 11, yin qiao, yin orifice. Nao kong is parallel to nao hu, and has the same connection with the brain. Kong is a hollow,

like a canopy or the celestial vault. The idea is that you can hold and conceal and retain something in a hollow like this. It can be a reservoir for everything which is rising up.

Kong is often coupled with qiao, which is the character for orifice. It is the same ideogram as used for the hollow of the bones. In kong qiao you have the complete expression for all kinds of hollows and orifices, for instance those which appear on the face. Kong alone has the meaning of hollow or void, so it is a place to receive and retain what is rising up to an area. In the body you can make a comparison between this celestial vault and the canopy of the skull with the brain inside.

Nao kong is at the base of this vault. It also designates the hollow of the bone where the marrow is. When kong and qiao are together they mean all kinds of orifices, especially those in the face. Each of them tends to have a special meaning within the couple, so kong will have the meaning of receiving and retaining and qiao the meaning of the power of emission. Just to the side of the point nao kong is Gallbladder 11, yin qiao, yin orifices, with yin designating the brain in this context. On the same line you therefore have nao hu (Du mai 17), nao kong (Gallbladder 19) and yin qiao (Gallbladder 11), three points in direct relationship with the power and structure of the brain. And fengfu (Du mai 16) is like a gate, a strategic point for the penetration of perverse wind. Gallbladder 12 is wan gu, the end of the bones, or completed bones. The meaning is found in relation to the location of the point at the end of one of the skull bones. This point is at the edge of the skull, but perhaps we also have the idea that if the bones of the skull are finished and achieved, all the bones of the body are also finished and full. The gallbladder meridian has a special relationship with the bones.

Claude Larre: The yang qiao, the yang orifices, are on the face and allow the yang to move outside. They are seven in number. The yin and the brain and marrow must be kept in contact with the skull. These are higher and more internal. When the opening is from outside to inside the opening is a hu. The hu is the orifice for entering, the kong is the place for displaying the activity and the qiao is the final production.

The last point of the gallbladder meridian, Gallbladder 44, has the same name, yin qiao, with the same characters. It is a way to keep in touch with the yin of the earth. It is the same with the bladder meridian and with Bladder 67, zhi yin, which designates an arrival at the yin.

The symptoms of wind affecting the brain are given in Su wen chapter 42 as fear of cold on the back, headache with pain which reaches the teeth and cheeks, and a feeling of chill inside. Some other books add vertigo or a flowing out of clear nasal secretions. These are a sign that the attack is caused by cold and wind.

SU WEN CHAPTER 37

Elisabeth Rochat: Here there is a description of the transmission of heat from one viscera to another. At the end of the chapter there is the example of when the gallbladder transmits heat to the brain. Then there is a break in the construction of the text and it starts again with bao, the uterus, the vital protective envelope which is one of the extraordinary fu. The bao transmits heat to the bladder, the bladder to the small intestines, the small intestines to the large intestines, the large intestines to the stomach, the stomach to the gallbladder and finally the gallbladder to the brain. At the end of the chapter you see that five of the six fu are given, with no mention of the triple heater, plus the bao and

the brain at the two extremities of the trunk. There is also a direct communication between the gallbladder and the brain, with the possibility of direct transmission of disease from gallbladder to brain. The symptoms of this kind of attack are severe pain at the bridge of the nose and nasal discharge which seems to come from the abyss, bi yuan. This would be unclear, continuous nasal discharge, rather like sinusitis. If the disease cannot be cured and spreads you can have a haemorrhage and the eyes close.

We saw before that nasal secretions are linked to the state of the brain in Chinese medicine. If there is internal cold then all the liquids and secretions irrigating the brain are clear. If heat injures the liquids then they are unclear and yellow and smell bad. This is not quite the same as when internal heat injures the liquids. That is a general state in the whole person. This is just heat in the gallbladder which is transmitted to the brain and attacks the liquids there. If the disease becomes more serious the heat can cause pressure on all the vital circulation and more particularly on the blood circulating in this area. As a result you can have nose bleeds or blood seeping out through the pores, although that is quite rare. In this serious situation the eyes no longer have what is necessary to maintain them. They lack essences and liquids and therefore they do not have the strength to remain open in the day. The individual is exhausted because there is a lack of essences at the level of the brain.

LING SHU CHAPTER 24

Elisabeth Rochat: There are two parts to this chapter plus a conclusion. The first part examines a lot of cases of headache, tou tong, and in the second part heartache, xin tong. These two presentations are perfectly symmetrical. Headaches and heartaches are first examined when coming from a deficiency of normal and correct qi and the symptoms are followed by the treatment. After that they give the case of zhen tou tong and zhen xin tong. Zhen is authentic. In these two cases there is no treatment because it is impossible to avoid death. The attack is not only at the level of the head or heart, but at the place where the authenticity dwells, so there is no treatment. In the case of the heart, the hands and feet become cold up to the bone articulations and the pain in the heart is very intense. If it happens at dawn you die at sunset, and if it happens at sunset you die at dawn. With the head, the pain is very intense, and the brain feels entirely painful. This is the only time the brain is mentioned in the chapter. Here too the feet and hands are cold right up to the bone articulations. Death results.

So the symptoms are the same for both head and heart. Ordinarily they would be linked with the spleen and stomach, because the link with posterior heaven is broken, but sometimes the symptoms are linked with the kidneys and their yang side because the fire of ming men, of the original yang, is too weak. In both cases there is no strength to make blood and qi circulate to the body's extremities. This is a sign of the weakness and deficiency of the authentic yang. The original yang fades away. For this reason the heart or head, where authentic yang is required, is intensely painful. The heart is not only a yin zang but also the tai yang like the sun of the body, the supreme yang among the zang and the body's universe. We can easily understand that in the case of the heart death comes in a day, for example with myocardial infarction. But in Ling shu chapter 24 we have the same thing with headaches, an intense headache and then death. The authenticity fails and there is nothing to do. It is not just a question of one meridian in a counter current.

SU WEN CHAPTER 47

Elisabeth Rochat: The title of this chapter is Qi Bing, extraordinary diseases. In it there is a series of pathological cases which are linked with the extraordinary fu and the extraordinary meridians. For example the uterus, bao, and the chong mai. One case has particular headaches which continue for years and years. The Emperor asks how a man can catch that disease and what is it called. Qi Bo answers that the man has been attacked by a great cold which penetrated to the interior right into the bones and marrow. Its mastering is in the brain, and the counter current in the brain gives headaches and painful teeth.

The name of the disease is a counter current (jue ni), resulting from a withdrawal due to insufficiency of correct qi coming from the interior. So here there is a relationship between marrow and brain, the way in which the kidneys are affected by this great cold, and how the bones and marrow are also affected and are no longer able to provide a good structure in the body. Little by little the brain becomes destroyed and you get this kind of persistent headache which lasts for years and years.

OTHER TEXTS ON THE BRAIN

Elisabeth Rochat: There are many other later texts on the brain. This is a text from the Pi Wei Lun, The Treatise on the Spleen and Stomach, written in 1249 by Li Gao.

It says, referring to a former text, that:

'when we consider the purity and clarity of the hearing and the distinction of odours through smell, they are made possible because in the interior qi is received from the brain, and towards the exterior the nine orifices function well.'

So the relationship between the brain and the upper orifices is compared to the relationship between the upper orifices and the interior. The brain represents the interior, and the storage of essences, and the upper orifices represent the possibility of keeping in touch with the exterior, or being able to receive something. If both are in a good state, then the vision is perfect, hearing is pure and clear and the sense of smell is also good.

According to Li Shizhen, 'The brain is the fu of the spirits, shen, in relation to the origin, yuan.'

Claude Larre: It is very subtle in Chinese, because it says the brain is the depot, fu, for the spirits, shen, which are the expression of what we are at the origin. We can understand that the spirits we are using now are the same as the spirits which were guiding our life when we started out to become human beings, and they are the same spirits as from the origin of the world itself. This yuan is the meeting point of the origin and the origin of myself. The sentence says yuan shen zhi fu, and if we understand it with normal grammar it means the shen which were at the origin. Yuan and shen are the same thing when we are talking of our origin at the level of the spirits. When we say yuan qi, original qi, we are more or less talking of that amount of qi from which we derive our life. But when we say yuan shen, it is on a higher level than yuan qi. It has the implication of the direction of our life. We know that the shen are supposed to lead our life and yuan shen, yuan qi or yuan jing (original essences) are the highest considerations from which we may derive some knowledge of how we exist. We exist from the yuan qi, the yuan jing allows us to see the yuan qi when it is specific, and the

yuan shen guide what the essences present as an organization of the qi. The shen are presented here as inside the brain, so brain and heart seem to be the two places which make the highest direction of our life.

Elisabeth Rochat: There is another work which puts the memory and the brain into a direct relationship:

'The memory of man is within the brain.'

In a late text of the Qing dynasty there is a treatment given for diseases coming from an attack on the brain by the wind or perverse qi invading at the neck. The text says:

'The connective system of the eye is in free communication with the liver below, but above it takes its fulfilment from the brain. When the qi of the brain is insufficient, then there is a correspondence with the qi of the liver. If the liver qi is empty it cannot enter into a proper correspondence with the brain.'

So with the pathway of the liver meridian, which passes through the brain to the top of the head, there is some kind of 'fulfilment' inside the brain, especially of the vision but also for everything which comes from the impulse of the liver. If there is the kind of attack and spasms which are described in Ling shu chapter 80, in order to treat this you have to tonify the liver qi greatly, because the liver qi, when it rediscovers its power, can fill the brain and help to expel the perverse qi and restore the vision.

In order to tonify the liver you may just as well tonify the kidneys, which would be a good idea because then you would directly tonify the marrow and the brain, and indirectly tonify the brain through the intermediary of the liver and perhaps the gallbladder. This is better than directly tonifying the liver which always has the risk of causing the fire of the liver to rise.

There is a compilation of medical texts from the 19th century which includes the following:

'The ling ji, the spiritual mechanism of the memory, is not in the heart, but in the brain. The heart is the pathway by which the qi comes in and goes out. How could the heart produce the spiritual mechanism of accumulation and retaining which is called the memory?'

If the heart is only a void then it is just a place of passage for ideas and thinking, and if the heart is never to retain or to be blocked by something, it is just a passage by which qi comes in and goes out. This is a 19th century text and therefore it uses this kind of dialectic, this would not be the spirit of a classical text. In a classical text the mechanism of memory is quite complex, for instance something between the kidneys, the spleen and the heart. The heart at this level is just the possibility of calling forth a memory. The spleen is a possibility of inscribing something and keeping it, and the kidneys are the possibility of ensuring the continuity of life, because if you do not have that continuity you have no memory.

Claude Larre: In the teaching on this point it is very clear that Western influence was already around, and it means that for the next century when talking of 'in' and 'out', it is supposed that they are talking of material spaces, which was never in the mind of the people of the former tradition. But nobody can say that the Chinese concepts of the earlier tradition were inadequate to talk of what man is.

Elisabeth Rochat: For this reason the memory is given to the brain.

'The solid and liquid foods produce qi and blood and nourish the layers of the flesh. Through transformation, the pure aspects of the juices and essences create the marrow. The marrow rises by means of the spinal cord into the brain, from which arises the classical expression 'brain and marrow'. It is because of this that the brain is called 'the sea of marrow', and that the bone at the top of the head is called 'the canopy to receive celestial influence'. The two ears are in free communication with the brain. Because of this, sounds in hearing are taken into the brain. When the qi of the brain is empty, the brain contracts and becomes diminished, and the qi of the brain can no longer make contact with the qi of the ears. Then there will be deafness through emptiness. But if there are obstructions and blockages, there will be deafness from fullness. The ears are the orifice of the kidneys, and the quantity and quality of the essences which rise to the ears are indispensable for good hearing.'

Afterwards this text treats the eyes and nose in a similar way. It also goes on to say that the brain is a mark of the completion or fulfilment of the individual. It says:

'When a small child is at the beginning of its life, its brain is not completely whole or formed. The fontanelles are soft, the eye does not have an alert and lively movement, which is a sign of the influx of heavenly influence. In the same way the ears are not able to perceive sounds very well, or the nose to perceive odours, and the tongue does not speak. But at the end of one year the brain is already better formed. The fontanelles are closed, the ears perceive sounds more effectively, the movements of the eyes are more alert and lively and more efficient. The nose can perceive odours and the tongue can speak a few words. After three or four more years, the closing of the fontanelles is complete and the functioning of the orifices is correct and the child can speak. So the small child has no memory because the brain and marrow have not yet reached their fullness. Because of this we have no memory of our first years when the brain and marrow were relatively empty. It is because of that that Li Shizhen says 'the brain is the yuan shen zhi fu. A commentator from the Ming dynasty also said that the memory of man is within the brain.'

One last text from the 19th century, The Art of Medicine, the Yi Shu says:

'The brain is the sea of marrow and the skull is its defence. In small children the fontanelles are not closed and the brain has not yet achieved its fullness. When the brain and its marrow are clear and pure, then the spiritual efficacy can find somewhere to stay. But if they are unclear and disturbed, then you have stupidity and bad perception through the sense organs, because these are the contrary of clarity and the ability to penetrate, which are the qualities necessary for intelligence, perception, hearing and vision. When one thinks, then the qi of the heart rises in free communication with the skull. When the brain and marrow are in a good state of fullness, then thoughts come easily. But when you think a lot, the fire of the heart burns the brain and the head spins, the vision becomes disturbed and the ears buzz. This shows that the marrow has been injured. The marrow is rooted in the essences for its production, and below it is in free communication with ming men, the fire of life, and with du mai the governor vessel, which is also present at this place. The fire of ming men or the yang of du mai warm and maintain the warmth of life, and then the marrow, which is in free communication with the essences of the kidneys and with this fire, overflows with power. But if through desires and emotions ming men is injured, then there will no longer be this rising and warming but a kind of collapse downwards. The brain and marrow are deprived of their nourishment and then they deteriorate.'

This text places the power of the brain and marrow directly in relationship with the essences of the kidneys and also with the origin of life, the fire of ming men, and even with the first expression of yang in the body, the du mai.

Elisabeth Rochat: The study of the brain illustrates the double aspect of the head. It is the end and gathering point of all the yang qi, but also the storing place of the essences, the yin, which is responsible for all the liquids in the top of the body, for example those which flow out of the upper orifices. It is also from these essences that the ming, the luminous radiance, is seen in the orifices as well as in thought. So we see the junction of yin and yang in the brain, which is the authentic, original yin and yang, since it relates to the fire of ming men as well as the essences of the kidney. The expression from Li Shizhen, yuan shen zhi fu, 'repository of the spirits in relationship to the origin', sums up this double aspect very well. The spirits are there, and all the relations between the brain and the heart are shown, with the heart certainly keeping the role of lord and master, but with the brain as the culminating point towards heaven presenting the ideal meeting place for what is most pure.

The idea of the cranial vault shows the concentration of the most pure yin essences in us, and it is just at this point that you can most easily receive the influences from heaven. So we find once again the idea of the head and the brain at the third level: after the origin at the level of the lower abdomen and the light of life at the level of the chest, the brain is seen as the summing up of both. If we remember the thoroughfares of qi and the four seas, we can see the same locations, the brain, the tan zhong (the centre of the chest) and the lower part which is shared between the stomach and chong mai. It is at these three levels that we find the dynamic points of command which are called 'ancestral', the ancestral muscle in the lower abdomen, the ancestral qi at the centre of the chest, and the ancestral mai around the eyes.

We can also remember that because it is an extraordinary fu the brain must store, and it must store because it is composed of the most precious essences in an individual. Because of this there is always this suspicion in regard to anything which is discharged from the upper orifices, and the idea that we must be very careful, because any discharge of fluids from the upper orifices can impoverish this region which must keep its richness.

We also saw that the richness and power of the brain has a feedback effect on all the marrow of the body. So in case of great weakness, it is not only the thought and the sense organs which are affected but the whole body, and there is the need to lie down and rest. In the same way we saw how an overabundance of the sea of marrow was rather the effect of an exceptional longevity than an actual pathology. At the level of the brain we find the power which is expressed in the kidneys. The brain is the meeting place for everything which rises, but it is also the place from where everything flows downward in the being.