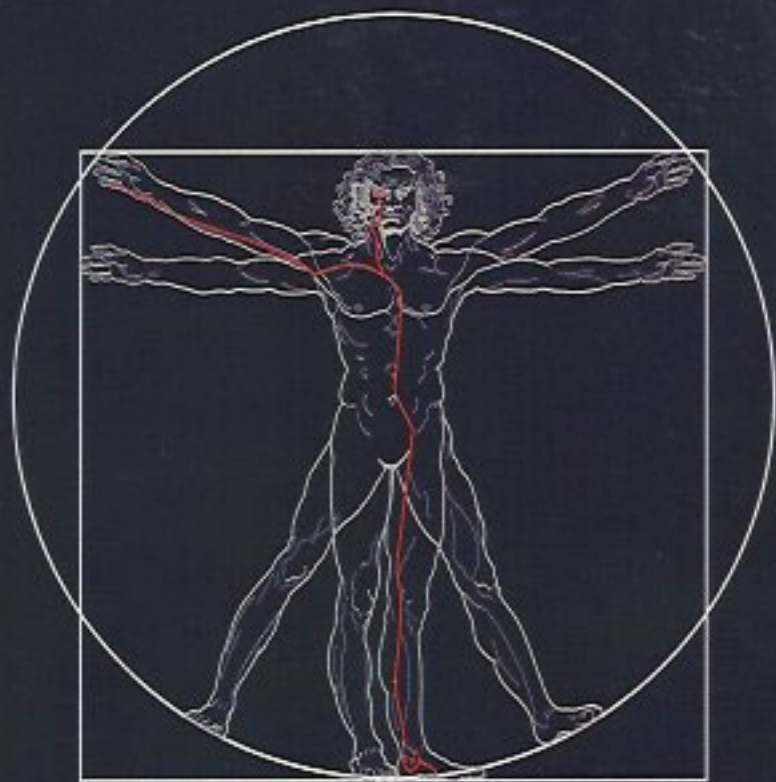


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The **Spark** *in the*
Machine

How the Science of Acupuncture
Explains the Mysteries of Western Medicine

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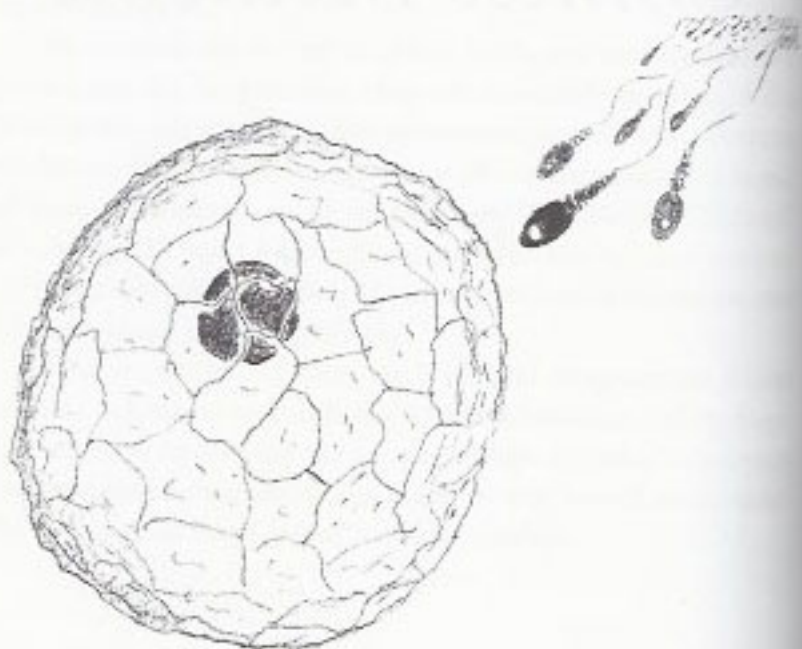
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Part II

*The Embryology of
Chinese Medicine*

An Introduction... to Yin and Yang



There is a moment before the beginning. It is a moment when a rocket fired by a thousand mitochondria blasts towards a planetary being floating in space. The rocket is in the race of a lifetime; against it are not one but millions of other rockets. Their cargo is a payload of DNA wrapped in an explosive envelope that will blast

through into the core of this planet. Here the male and female DNA will combine to create new life. If the rocket succeeds in delivering its payload it will achieve the ultimate prize...immortality.

The world of Yin and Yang is thus shaped. When the Chinese describe the Yang aspects of the cosmos it was male and fiery, rockets and explosions; the Yin was female and earthy, Jane Austen and cream teas.

Yin and Yang form a duality, a completion of the cosmos. In order to understand Chinese philosophy (and hence science) it is necessary to understand this cosmology.

Nowhere is Yin and Yang better expressed than in this ultimate race – the race of sperm to egg. It is difficult to think of a more Yang substance than sperm: it is fast, shaped like a rocket, packed with engines (mitochondria) and even contains an explosive tip.

Yang lives fast and dies young.

Eggs, however, are the archetype of Yin: they are immobile and fat (an egg is thousands of times bigger than sperm), packed with nutrients, but allow themselves to be wafted through life. They are so passive that they just lie there waiting for a sperm to penetrate them, completely incapable even of deciding which sperm will succeed.

Yin barely lives but lasts forever.

Even their origin is a manifestation of the principles of Yin and Yang: sperm are produced on the outside, eggs on the inside.

Yin and Yang do not exist as separate entities, though; they are part of a whole, they cannot exist without each other. When they fuse they complement each other, complete each other, and just as the philosophy of Yin and Yang teaches, start transforming into each other...

The Three Yin Channels

The embryo has got to a stage where it is ready for even more complexity (have you?). The one cell turned into many, compacted, formed an egg yolk, made a Flat Disc and then curled that up on itself to form a tiny embryo floating inside an egg.

It has a back and spinal cord; now it must start forming organs. It does this through six great cavities that weave through the body, six cavities that are used as Acupuncture channels.

These six cavities all have a top and bottom, Yang and Yin; and this forms the basis of the Chinese assertion of 12 organs.

Furthermore, the six cavities arrange themselves from back to front, another manifestation of Yang and Yin.

The arrangement of the cavities in the body creates what the Chinese call the six layers, and as we shall see, amazingly, incredibly, these layers all make perfect anatomical and embryological sense:

- TaiYang
- YangMing
- ShaoYang
- ShaoYin
- TaiYin
- JueYin.

These six layers are shown in the figure on the left.

Why six layers? It is simple a question of combination. The three layers – Angmion, Yolk and Blood – divide into each other.

Yin

When embryologists and anatomists draw pictures of these cavities they are sometimes drawn as massive spaces, but in reality there is almost no space at all. Just like in the drawing of the *Taijitu*, or an unopened supermarket plastic bag, the space between the cavities is almost invisible.

The space is potential space.

These potential spaces are the channels. The 'organs' pair up in the channels:

- Heart and Kidney in the *ShaoYin* (what Western medicine calls *retroperitoneal*)
- Pancreas, Spleen and Lung in the *TaiYin* (what Western medicine calls the *anterior pararenal space*)
- Liver and Pericardium through the *JueYin* (peritoneum, diaphragm and pericardium).



These channels or cavities are known in Western medicine too, but in this case they talk about them as *compartments*. As stated in Part I, compartments are like rooms in a house. The walls of the room are made of fascia and the only way in or out is through the windows or doors. The fascia is immensely strong, and just like the walls of your rooms you can't go through them; you have to use the paths in the house.

Your body is like the whole house. Just as in your house, there are connections between all the rooms, including stairs up and down and maybe even hidden doorways (this is the case with Ming Men).

Also just like your house, at one level this arrangement is very simple; there is no need to conceptualise it any deeper. In the same way that you have different roles for the rooms of the house, so does the body, but the house remains its own structure.

These fancy Western names – *anterior pararenal, peritoneal, retroperitoneal* – are just like names of a room – *dining, kitchen, study* – and so the name is not that important. What is important is that they represent a distinct room in the house, a compartment... part of an Acupuncture channel.

This book, and Acupuncture, is about how you move through that house, and the role of each room.

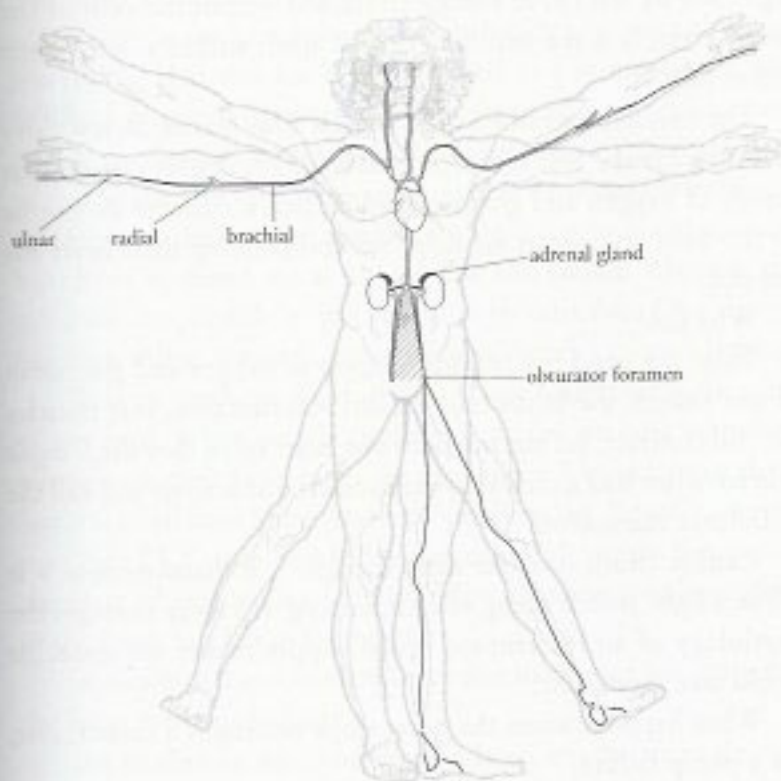
In the same way that you will link your dining room to the kitchen to facilitate ease of eating, so the body also links various organs together.

The Western names listed above have to be included because the whole point of this book is about how Western medicine validates Chinese medicine...all I can do is apologise for the ridiculous names that my fellow doctors have used to describe these compartments...

The organs, and hence the Acupuncture channels, have to connect through the fat layer of muscle between chest and abdomen – the diaphragm. They do this through the only three openings in the diaphragm:

- aorta (Heart and Kidney – ShaoYin)

ShaoYin (Lesser Yin)



Yin

The Emperor

'The Heart is the Emperor, the Supreme Controller'

NEIJING SUWEN, CHAPTER 8, 2ND CENTURY BC

The Heart is the centre of our being. It is here that our emotions live, our hormones beat, where we *feel* our life.

The Heart is the first (proper) organ to appear. Its beating is organised by the nerve energy contained within the cells of the neural crest; it is the manifestation of spirit within matter, Shen within Jing.

The moment our heart stops we die. Our bodies do not carry on living for the few minutes it takes to extinguish our cellular supply of oxygen and glucose; cardiac attack patients do not lie on the floor crying out for help and complaining their heart has stopped.

Why not?

There is a good few minutes' supply of oxygen and glucose in all our tissues, the brain cells should still function, our muscles can still contract, yet the moment our heart stops they die. People who have just had a cardiac arrest should be able to go and call the ambulance themselves!

Cardiac death isn't like that, though; it is instantaneous – it is like a light switch going off. Explaining this away through the physiology of an interrupted blood supply makes no sense...it would take more time.

What happens when the heart stops beating is a catastrophe, not a pump failure.

Chinese medicine has never considered the Heart to be a simple pump, though. The *Neijing SuWen* states unequivocally:

The Heart is the Emperor, the Supreme Controller. The Heart is the Fire at the centre of our being, from which Spirit radiates.

Poets and artists have understood this truth for aeons. It was only cold logical science that has denied it the last 400 years. Our literature is full of references to its primacy:

'Follow your heart'

'Listen to your heart'

'A heart-to-heart'

'Have a heart...'

The poets understood the Heart's role at the centre of our being – it is only as we have become more thinking in our culture and less feeling that this has been relegated to a pumping machine. William Harvey's discovery of the Heart as a pump was never meant to dismiss its emotional importance.¹ Thinking occurs in our brain and our Western society is extremely governed by thinking, by deductive reasoning, by logic. Feelings and emotions have been squeezed out as unscientific and fallible. They are anti-scientific, impossible to pin down, irreproducible. One day you like something, the next day not – how can this mean anything?

Western medicine holds that it is our brain that is the centre of our soul. When people commit atrocities we now ask what is wrong with their head, not with their heart. I would argue that in fact it is often their heart where the problem lies. Equally, scientists pore over PET scans and MRI scans of people's brain functions to elucidate where love lies, but I will show that love is only processed in the head, but felt in the heart.

Ironically, it is modern medicine that shows just how important the heart is to our feelings.

The studies on relationships and heart attacks are so dramatic that if you could bottle what occurs between loved ones and sell it as a drug you would be the richest person on Earth.

These studies show that, in fact, one of the most important things for you avoiding a heart attack – along with stopping smoking and exercising – is having a loving relationship!² Furthermore, if you have a heart attack, forget about getting pills – what you really need is a husband or wife who loves and listens

Yin

to you, for with these people you are three times as likely to be alive after 15 years!³

Sadly, when your loved ones do die, watch out: broken hearts are real. In the first day after a bereavement people are *21 times* more likely to get heart attacks.⁴ There is even a condition called *Takotsubo cardiomyopathy*^{*} that afflicts those with a sudden bereavement and leads to heart failure and death without treatment. Doctors call it 'Broken Heart Syndrome', although this is as likely because they can't pronounce the Japanese as anything else. Strangely, the treatment is the same as for those having a 'real' heart attack, but even in Western medicine, a medicine that has little time for emotions, the cause is accepted to be a broken emotional heart.

Philanderers should be aware too. A recent study shows that men are twice as likely to die of a sudden heart attack with a mistress than with their wife. A cheating heart is also an ill heart.

It doesn't stop there, though. There are now so many case reports of personality changes after heart transplants that many surgeons counsel for this. Stories abound of heart transplant recipients receiving new memories with their hearts, of falling in love with the old flame of their donor, taking up the hobbies of their donor, of developing new tastes that their heart seems to hold, even of changing their sexual preferences from men to women!⁵

Yes, these could be coincidences, or side-effects from medication, and that is how they have been dismissed, but it takes a strangely cold person to dismiss stories of hearts that appear to be in love with someone.

There is the touching and heart-breaking story of the mother, a doctor, who could feel her little son's soul in the recipient:

The first thing is that I could more than hear Jerry's (donor) heart. I could feel it in me. When Carter (the recipient) first saw me, he ran to me and pushed his nose against me and rubbed and rubbed it. It was just exactly what we did with

* *Takotsubo* means 'lobster pot' in Japanese because the heart balloons out like one. This is caused by the heart being too weak to physically pump.

What is the electricity that flows in our bodies? How can children regrow fingers and primitive animals entire limbs? Do Qi (pronounced 'chee') and Acupuncture channels really exist in the body?

Dr Daniel Keown's accessible, humorous and truly original book shows how Western medicine supports the theories of Chinese medicine, and how Chinese medicine explains the mysteries of the body that Western medicine largely ignores.

Taking you on a journey back to the beginning of time, he shows the incredible story of how our bodies form from single cells, why the hearts of two people in love truly beat as one, why astronauts get osteoporosis in space, and how Jing and neural crest cells are really the same thing.

This is medicine like you have never read it before.

'Wow! I couldn't put it down! Everyone from the general public to Western and Eastern medical practitioners, in fact anyone who is curious about the remarkable way the human body functions and develops, should read this book.'

— Angela Hicks, Joint Principal of the College of Integrated Chinese Medicine, Reading, UK, and author of *The Principles of Chinese Medicine*



Dr Daniel Keown has worked as a registered doctor since graduating with a medical degree from Manchester University in 1998. In 2008, he completed a degree in Chinese Medicine and Acupuncture at Kingston University, and he has studied alongside the renowned Dr Wang Ju-Yi at the Institute of Channel Diagnosis in Beijing. He lives and practises in Tunbridge Wells, UK.



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