

16

Afterbirth: Eat it, Burn it, Bury it under a Tree

One can see what custom can do, and Pindar, in my opinion, was right when he called it 'king of all'.

Herodotus, *The Histories*

AT FIRST GLANCE umbilical cords seem to come from the sea: opalescent and rubbery like jellyfish fronds or stems of kelp. Their contours are torqued in a triple helix of blood vessels; twinned arteries spiralled around a single vein. The purplish blood vessels braid themselves through greyish jelly composed of a substance used in only one other place in the body: the refractive humours of the eye. They look soft and delicate but are tougher than appearances suggest; for nine months they have to tether a baby to life.

The wrinkle-faced, bunch-fisted girl I had just delivered was already squalling, and I dried her with a towel and held her down beneath the level of her mother's hips for a moment. The placenta was still inside her mother's pelvis – in these first moments I wanted to let blood run from it down into the baby's body. I put my fingers again on the cord, feeling the pulse of her tiny heart fluttering within it like a trapped moth. 'Is everything alright?' asked her father. He looked stunned by sleeplessness, and the agonies of labour that he had just witnessed his wife going through.

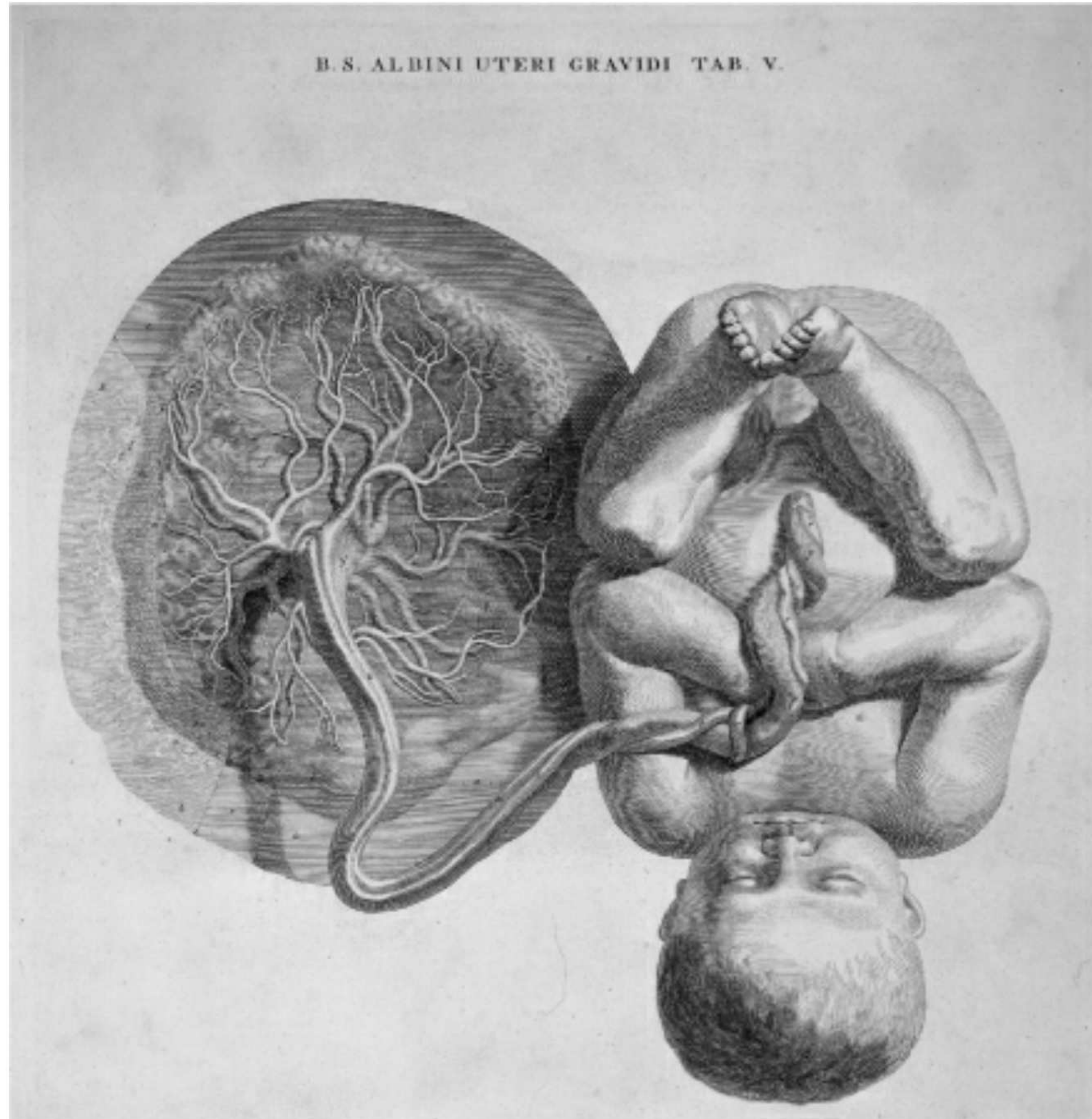
'Fine,' I said, 'absolutely fine.' As I watched the girl, my fingers on her cord, the pulse in it thinned out and then stopped – a reaction to the coolness of the air and the higher oxygen levels in her blood now that she was breathing for herself. Inside her liver and around her heart other blood vessels were closing off in synchrony. These are 'shunts' that during her time in the womb had diverted blood around the developing lungs and liver. Other vessels for carrying blood to and from the lungs were at the same time opening up – it was thanks to them that her blood was reddening with the flush of oxygen. A hole in her heart, necessary for

circulation while she was inside the womb, was closing over. Her umbilical arteries were closing too, narrowing from their origins deep in her pelvis running out towards her umbilicus. It was because of this concert of changes that her bluish, waxy face was pinking up. Only when the pulsing of the cord had stopped did I place plastic clips across it.

The midwife handed me some scissors, scored and blunted from their many passages through the steriliser, and once again I marvelled at how a substance seemingly so fragile can be so hard to cut; I had to hack at it as if at a hawser. For the delivery of the baby the mother had been on all fours, but as I handed her daughter up to her she heaved herself onto her back, pulling the baby onto her breast with an astonished gasp. As mother, father and baby dissolved into a universe of three the midwife and I looked down at the business end. This wasn't over yet.

The 'third stage' of labour is unexpected for many, as if the show should be over with the birth of a child. But a storm of hormones and chemistry was shearing the placenta from its mooring against the womb lining. If contraction occurs too slowly the blood can go on pouring from the raw surface of the womb – a 'post-partum haemorrhage'. I pushed my hand gently, but firmly, onto the mother's slackening abdomen, to feel if the womb was shrinking down. It was.

With a pair of steel tongs I pulled gently on the cord. The baby was already at her mother's breast: as she sucked, hormones hastening the let-down of milk also caused the mother's womb to tighten. As I turned the tongs, the cord blanched against their steel – the arteries and vein within were already ghosts of their once vigorous selves. Then, as I pulled, the cord suddenly widened the way a tree trunk does just before its roots spiral into the earth. The 'afterbirth', a violet clot of blood, slithered from the mother's body onto the bed.



It was heavy – over half a kilogramme – almost round and about an inch thick. Since early in the pregnancy it'd had to carry oxygen, sugar and nutrients towards the developing foetus, as well as carrying carbon dioxide, urea and other by-products back towards the mother. The pressure pulse of this remarkable exchange had been driven by the baby's developing heart. The blood of mother and baby don't mix, but the capillaries belonging to each are brought together so closely that it's as if a million tiny hands locked fingers across the placental divide. Da Vinci noticed this distinction over five hundred years ago, when many of his contemporaries still believed that babies grew by consuming their mother's menstrual blood. Leonardo's placental drawings betray a familiarity with the afterbirth of the sheep; it's thought he only saw one cadaver of a woman who died in pregnancy. He wasn't alone: European men through the centuries seem to have had more familiarity with sheep placentas than those of their own children. Even the scientists' word for the placental membrane, *amnion*, is taken from the Latin for 'lamb'.

Most of the elements of our anatomy are robust enough to see us through four or five decades at least before they start to fail, but an organ that need last only eight or nine months shows just how fragile human tissue can be. I've seen placentas turn brittle and grey, either because of the toxins they've been exposed to or from the relentless deep-fry nature of the Scottish diet. The worst are the placentas of heavy smokers, clotted with knots, yellow and hard as ambergris.

This placenta was clean though, and I spread it out on a steel tray. The gossamer remnants of the amniotic sac were fused into the placenta itself, and I couldn't find any rips. 'Membranes intact,' I said to the midwife, before taking it by the stump and hoisting it awkwardly into a plastic bucket. I clipped on an orange lid as if sealing a pot of paint, then carried it through to the waste room on the ward. From being the centre of this baby's world, essential for life and growth, it was now part of the anonymous stack of placentas and umbilical cords that had been delivered that day, and which later tomorrow would be burned in the furnace beneath the hospital's smokestack. What was nourishing the baby only that morning would tomorrow be smoke floating over the city.

THE GREEK '*OMPHALOS*' comes from the same root as the Latin '*umbilicus*': both carry the sense of being at the centre either of the body or the world. For the Greeks the Omphalos, a stone at the Delphic Oracle, was considered the geographic centre of the earth. Around the time that people were making pilgrimages to Delphi, the Greek traveller and historian Herodotus wrote about the way different customs were prevalent across different parts of the ancient world:

One might recall, for example, an anecdote of Darius. When he was king of Persia, he summoned the Greeks who happened to be present at his court, and asked them what they would take to eat the deadbodies of their fathers. They replied that they would not do

it for any money in the world. Later, in the presence of the Greeks, and through an interpreter, so that they could understand what was said, he asked some Indians of the tribe called Callatiae, who do in fact eat their parents' dead bodies, what they would take to burn them. They uttered a cry of horror and forbade him to mention such a dreadful thing.

For Herodotus, custom was everything, and for the past few decades in the West our custom has been to burn placentas with the soiled dressings, diseased organs and contaminated needles of the hospital incinerator.

Just as Darius' Greeks were horrified at the prospect of eating their fathers, and the Callatiae of India were horrified at the dishonour of *not* eating them, the practice of eating placentas arouses fierce emotions, both for and against. Placentas are a rich source of progesterone, the hormone that maintains pregnancy, and a crash in body progesterone has been proposed as a trigger for 'baby blues' – the disturbance in mood after childbirth that often cedes to post-natal depression. Eating the afterbirth is a common habit among carnivores, as well as omnivores like chimpanzees – our closest relatives. It could be that the practice is not just about nutrition, but about letting an exhausted mother come down gently from her progesterone-high.

There is only one reference in the Old Testament to the afterbirth, and it's about breaking taboos: in Deuteronomy 28, verse 57, a woman is given permission to eat the ordinarily prohibited placenta because her city is under siege. But in other cultures around the Mediterranean rim a new mother was traditionally encouraged to eat afterbirth in order to help her milk come through, and to reduce after pains as her womb contracted back down to its normal size.

From Morocco to Moravia to Java, women have eaten the placentas of their own children, or those of other women, in order to improve their fertility, while in Hungary the ashes of a burnt placenta were fed in secret to men in order to *reduce* their fertility (this isn't as daft as it sounds: female sex hormones can sometimes aid female fertility, while at the same time inhibiting sperm production if taken by men). During the Tang dynasty in China, around the seventh century ce, the placenta of a live-born girl was advocated in a spell to transform oneself into a young girl.¹

The eggs of the earliest vertebrates evolved to grow bathed in seawater, and by developing a womb full of amniotic fluid, we mammals have evolved a way of carrying a sea inside us. That the membranes in the womb have a close connection with the sea seems to have been recognised since earliest times: those membranes, the caul, have often been considered protective against drowning. In the cultures of the British Isles, a baby who emerged still wrapped in its caul was destined to be a strong swimmer, and would be possessed of good fortune. Charles Dickens's *David Copperfield* starts out his autobiography with a discomfiting discussion of how his own caul was put up for sale to the highest bidder for just this reason:

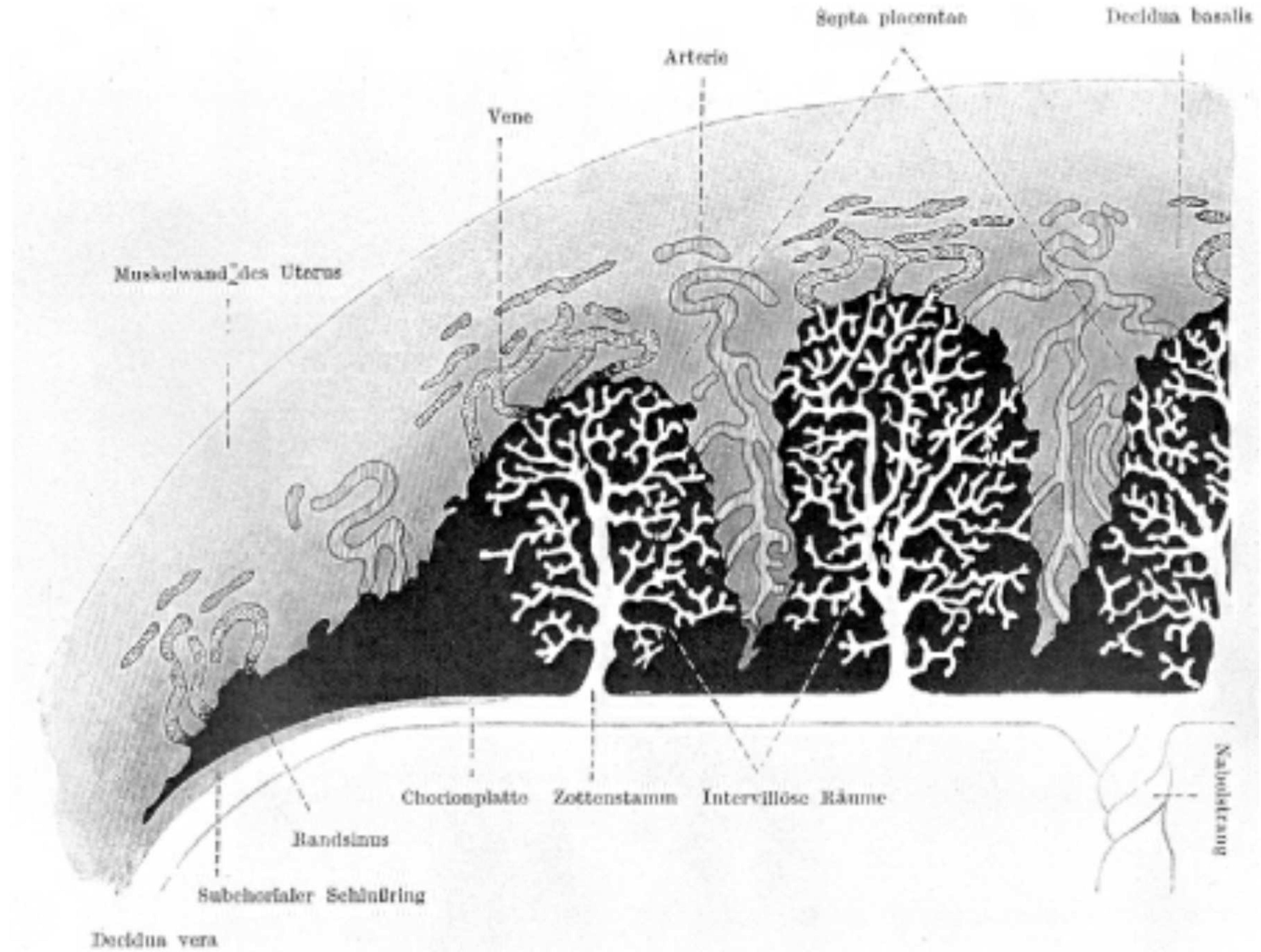
I was born with a caul, which was advertised for sale, in the newspapers, at the low price of fifteen guineas. Whether sea-going people were short of money about that time, or were short of faith and preferred cork jackets, I don't know; all I know is, that there was but one solitary bidding.

As far apart as Japan and Iceland the traditional method of disposing of a placenta was not to inter it beneath a tree, but to bury it under your house. In Japan a priest would choose the location of the burial place, whereas in Iceland it would be buried in such a position that the mother's first steps in the morning, as she rose from bed, would stride across it. Another old Chinese text advised burying the placenta and cord deep in the ground 'with earth piled up over it carefully, in order that the child may be ensured a long life. If it is devoured by a swine or dog, the child loses its intellect; if insects or ants eat it, the child becomes scrofulous; if crows or magpies swallow it, the child will have an abrupt or violent death; if it is cast into the fire, the child incurs running sores.'

The Russians traditionally saw the placenta and umbilical cord as sacred; Orthodox Christians dedicated it in particular to the Virgin Mary, the governess of fertility. Following delivery, the afterbirth would be laid out for a time on the local church altar, where it was believed to influence the fertility of other women in the community, before being buried.

Some Indonesian peoples held that because the placenta and its membranes seem to have come from the sea, it must be returned to it: after being placed in a pot it would be thrown into the river to float back to the ocean. This was done to prevent the placenta falling into malign hands (the idea that the placenta is part of the child, and is in some way identical with it, is a persistent one). Other South East Asian peoples prepared a funerary bier for the placenta, surrounding it with oil lamps, fruit and flowers, before floating it downriver.

For some cultures it has not been the affinity of afterbirth with the sea that has been celebrated, but its resemblance to a tree: the way that the spiral trunk of the cord seems rooted into the earth of the womb. I've been told that during the delivery of a baby – the second stage of labour – the pain women experience is that of relentless waves of pressure combined with the knife-and-fire stretching of the perineum. Passing the afterbirth is quite different; a deep sense of an uprooting, of something long buried being tugged free. In *The Golden Bough*, James Frazer's magisterial work of cultural anthropology, several cultures are described as burying the placenta beneath a sacred or significant tree, which then retains its connection to the child throughout the life of both. The tree is renamed for the child, and becomes the centre of its world just as the Omphalos in Delphi was the centre of their world.



The leaflets advertising umbilical cryogenics have two types of picture on them: cute and smiling children at play, or radiation-suited scientists engaged in some challenging laboratory task. There are no images representing multiple sclerosis, Parkinson's disease or leukaemia, despite the companies' claim that storing stem cells might be an insurance policy against these illnesses in later life. You can donate stem cells to a public bank, for use by anyone, or you can pay a private company to store your baby's cord and stem cells for the sole use of your family.

Some cultures maintain that a baby's visceral connection to its umbilical cord is an association that lasts a lifetime, and for that reason the cord must always be handled with respect. These cryogenics companies agree: if you want a private cord-bank to store your baby's umbilical cord you can arrange for a lab scientist to be on standby for the birth of your child in order to extract the stem cells within the critical time period in which they're still viable. Your baby's lifetime's association with the cord can be maintained through regular payments from a credit card. The National Health Service in the UK now has a cord-blood storage service, preserving stem cells for research, and investigating their use in bone marrow transplants for whoever might need them. Within a decade we've gone from throwing afterbirth out with the trash, to reinvesting it with a depth of significance that had almost been forgotten.

There's some debate as to whether the private banks can ever supply enough stem cells to treat an adult, and so it remains controversial whether the high costs of preserving a child's cord for its own use are justified. While the East African might feel tied to his umbilical tree, rooting him to a particular patch of the earth, you're unlikely to draw strength and a sense of belonging from regular visits to a cryogenics lab. The laboratories themselves share specimens, and your cord may end up being stored in another country altogether, inaccessible to you or your child. But at least it will be out of reach of ants, swine, dogs and magpies.

Footnote

¹ The spell-book was called *Collection of 10,000 Feats of Magic*.