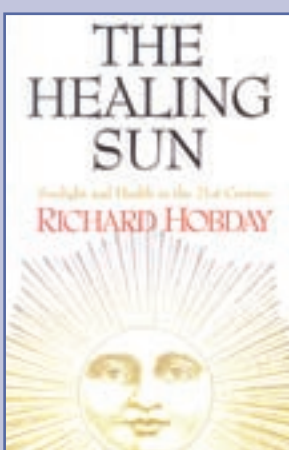


Taking our Place in the Sun

Carl Gardner reviews two books which completely re-assess the role of sunlight in human health – and explain why keeping that ‘pale and interesting’ look could be a deadly fashion choice



The Healing Sun by Richard Hobday (Findhorn Press, 1999) and *The Light Revolution: Health, Architecture and the Sun* by Richard Hobday (Findhorn Press, 2006)

These are two very important books that, in my view, should be read by every doctor, health professional and policy maker in the country (and in the case of the later book, add in architects and town planners as well). It is also a vital read for anyone who wants to remain fit and

healthy into old age. If its central message was taken on board, society could potentially save billions of pounds in health service costs and millions of people could live happier lives.

‘Where the sun does not go, the doctor does’ is an old Italian proverb – and in *The Healing Sun* Hobday sets out to demonstrate the truth of this wise saying, in an extremely persuasive manner. Supported by dozens of epidemiological and research studies from around the world, he shows that not only is sunlight good for you – it is absolutely essential to maintaining our immune systems and can help combat a host of ailments, including various cancers, heart disease, MS, high blood pressure, diabetes, obesity, osteoporosis and tooth decay. As he points out, this runs counter to current medical advice that the sun’s rays are dangerous, that tanned skin is not a sign of health and that we should avoid sunlight like the plague.

Yes, people do get skin cancer from **over-exposure** to the sun – often brought about by short periods of foolishly intense skin-scorching on Mediterranean beaches followed by 50 weeks of living and working under artificial light. This is certainly not the correct way to gain the benefits of sunshine, without the pain – rather Hobday and other specialists recommend gradual, controlled exposure of the human body to direct

sunlight over a period of time (and preferably in the morning) so the skin builds up its own defences to UV. Burning is good for no one. That said, the death toll from skin cancer in the UK is only about 1800 people per year, whereas Hobday argues that deaths resulting indirectly from **staying out of the sun** could be many times higher.

Vitamin D the Key

Why is direct sunlight so important for human health? One major reason is vitamin D, which seems to have a number of vital functions in the body, including the maintenance of a healthy immune system and ensuring the take up of calcium to build strong bones. The UV in sunlight stimulates the body to produce vitamin D in abundance and we can store a certain amount in the body for use in the winter months, when sunlight is limited.

There are dietary sources of vitamin D, most notably oily fish, full cream milk, cheese and butter – and, of course, cod liver oil, which post-war babies (including this writer) were routinely given in the early days of the NHS. This is one of the most concentrated forms of Vitamin D in food form, but while one teaspoonful of the rather foul-tasting liquid contains about 600 units of Vitamin D, exposure to the sun to the point of the skin reddening slightly (20-30 minutes for most people) stimulates the body

to produce around 10,000 units!

However, the average British diet only supplies about a quarter of the recommended amount of Vitamin D. The result is that an estimated 70% of the UK population is actually Vitamin D deficient – and the consequences are disastrous, in health terms. Take rickets, for example, that other 19th century affliction of the poor, which also proved amenable to sunlight treatment – despite still being seen as a disease of nutritional deficiency. In the mid-20th century, when parents routinely put their children out in the sun to play, rickets seemed like a disease of history – but nowadays it is on the rise again (along with TB) in developed countries, partly because people have been panicked into keeping themselves, and their children, out of the sun by a medical profession obsessed with skin cancer.

Brittle Bones

Another disease Hobday discusses at length is the hidden epidemic of osteoporosis in women. Amazingly, in the UK more women die from hip fractures, due to weak bones, than cancers of the cervix, ovary and womb combined! Women, in particular, lose the ability to absorb calcium from their diet as they get older – but Vitamin D is absolutely crucial for facilitating the uptake of calcium in bones. So what do we do with old

people? – encourage them to stay at home or stick them in old folks' homes, with little exposure to the sun, plus poor diets, so compounding the problem.

None of this stuff is new – as Hobday explains, ancient cultures such as the Greeks, the Romans and the Egyptians knew that the sun was good for you and it could be used to treat a wide range of diseases and maladies. They didn't have a scientific explanation for these processes, but empirically, they knew that it worked – for example the Greek physician Soranus of Ephesus prescribed sunlight treatment for chronic diseases such as epilepsy, paralysis, asthma, jaundice and so on.

So why was this knowledge lost? Christianity could well be to blame – early Christians probably saw heliotherapy (sun treatment) as closely associated with pagan sun-worship and solar cults, which to them were an enemy of the true faith. When Christianity came to power, it exterminated all vestiges of sun worship – and knowledge of the healing power of the sun was lost for over a millennium. The Dark Ages were indeed well named.

Learning Again

In fact, it wasn't until the 19th century that sunlight as a medicine was re-discovered, and popularised, in the context of the growth of TB. This disease was rampant in the industrial slums of Europe, where the poor were deprived of all access to sunlight, due to atmospheric pollution, 12-hour shifts in factories and



Children with rickets in the 1930s – the disease is now making a return

poorly designed housing. The heroes who re-discovered helio-therapeutic medicine included the British scientists, Downes and Blunt, who began the conquest of TB using sunlight and the Dane, Niels Finsen, who was awarded the Nobel Prize for medicine in 1903 for his pioneering work on the treatment of *lupus vulgaris* (TB of the facial skin) using ultra-violet lamps and natural sunlight. It was Finsen who set up the first 'Light Institute' in Copenhagen to treat TB patients.

A year later, Dr Auguste Rollier, the 'high priest' of sunlight therapy, set up his own TB clinic at Leysin in Switzerland, based on a regime of very gradual solar tanning in cool

conditions, plus fresh air, exercise and good nutrition. It undoubtedly worked, proving quite categorically that TB had been conquered using natural, and relatively inexpensive, methods some 30+ years before the introduction of antibiotics, which usually take the credit.

It is at this point, in his second book, *The Light Revolution*, that Hobday translates his thesis into the world of architecture – and the way that, firstly, the founders of the late 19th century 'Garden Cities' in the UK, epitomised by Bourneville and Port Sunlight, and then the early modernists, such as Garnier, Le Corbusier, Mies van der Rohe and Alvar Aalto, were hugely influenced by the

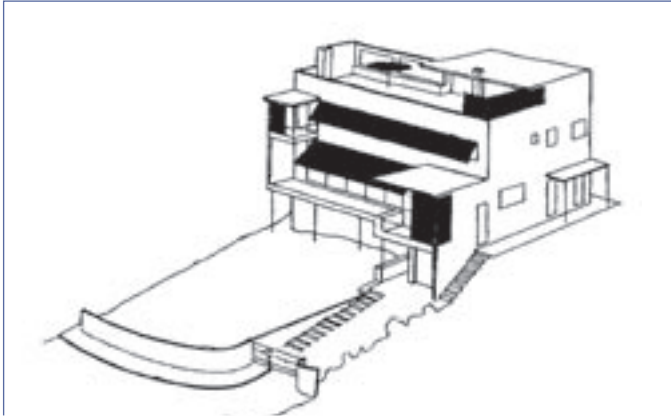
growing body of knowledge about the positive effects of sunlight.

Many of their buildings, with flat roofs, large balconies, terraces and full-height opening windows, were designed to maximise exposure to the sun and to facilitate outdoor exercise. Some did it better than others – and many didn't grasp the notion of orientation and solar planning, which ironically the Romans and Egyptians understood perfectly (the Romans even had the right to sunlight embodied in their planning laws – something which would certainly scotch today's urban fixation on high-rise buildings which obscure the sun). But in terms of relating architecture to health, modernism was a huge step forward.

The New Dark Ages

And then, around the time of World War 2, a second 'Dark Age' descended – with the rising power of the drug companies and their expensive 'magic bullet' solutions for disease, such as antibiotics, why rely on something as primitive and unreliable as the sun? Only in the Soviet Union, which couldn't afford to import Western drugs, did sunlight (and other light-based) treatments continue to develop. In the West, the knowledge gained in the previous 70 or 80 years, was once more forgotten by mainstream medicine. In architecture too, sunlight, even daylight, eventually came to be seen as a problem to be excluded and controlled, in offices, schools and hospitals.

Even leaving aside specific forms of treatment, there is now incontrovertible



Maxwell Fry's 'Sun House' from 1935, which provides spaces for sunbathing

evidence that people feel less pain, and recover faster, in sunlit wards with access to fresh air, compared to wards lit and ventilated artificially. At the same time direct sunlight is a known anti-bacterial agent (even through glass) which could help combat MRSA

and other 'super-bugs'. Yet most new hospitals are still not designed to maximise sunlight ingress or natural ventilation – features which had even been advocated by Florence Nightingale in her original designs for what became known as 'Nightingale wards'.

Hobday's story is a fascinating one – and it includes much more than I can summarise here. But at the same time it is both inspiring and depressing in equal measure. For a start he doesn't seem to have yet formed any alliances with architects, and building commissioners, to put his ideas into practice in built form. That his broad thesis is correct, I have no doubt, and I am already making changes to my personal lifestyle. But what can we do to turn the tide, to challenge the stubborn orthodoxies of medicine, as well as those of building, planning and health policy? Certainly, more research is needed, to demonstrate the health benefits of sunlight, but who is going to fund it? After all, you can't patent sunlight

and sell it at enormous profit, like you can drugs.

I have one small recommendation relating to workplaces, which has some similarities with what happens in Japan and China. Knowing what we know about sunlight, and the need to re-set our circadian rhythms under artificial light, there might be a simple way for employers to ensure that staff remain alert, efficient, healthy and less prone to sickness. How about the establishment of a 'sunlight break' in mid-morning and mid-afternoon, on suitable days, when workers must socialise outdoors in the sun for 20 minutes or so? For many workers, it might even save their lives.

Lighting & Health

Advance notice of one-day conference, organised by the ILE

March, 2009

Dr. Richard Hobday, author of *'The Healing Sun'* and *'The Light Revolution'* (reviewed above) will be one of the speakers at a one-day conference on 'Lighting and Health', organised by the ILE, which will take place in Central London in March, 2009.

The conference will cover such issues as the effects of sunlight (and sunlight deprivation) on human health, the latest discoveries relating to the 'third eye', the importance of maintaining circadian rhythms in the workplace and use of coloured light therapies.

The morning session will concentrate on the latest theoretical work and research into these important issues, while the afternoon will look at specific applications, relating to therapeutic and medical practice – and to the implications for lighting design.

More details will be advertised in the next issue of LJ – or go to www.ile-events.org.uk