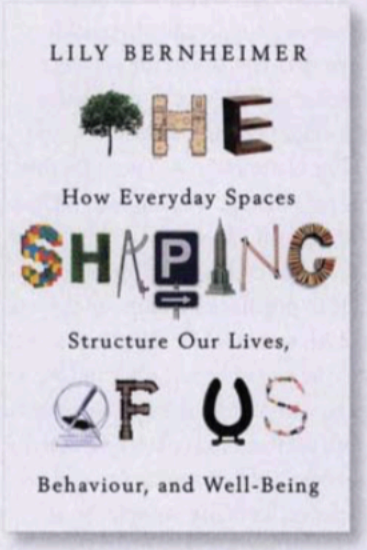
Kevin McCloud

This month, our editor-at-large reveals the ideal recipe for a happiness garden... and it all goes back to our ancestors

I don't know if you spend your winter reading gardening books, hoping for inspiration for the coming spring. I've just read a new book by the environmental psychologist Lily Bernheimer, *The Shaping of Us* (Robinson, £14.99), in which she outlines how everything around us determines our behaviour, not just the natural world but the built world too. It's not really a gardening book, more an analysis of how we could design the whole of our environment to be better. In her view, psychologists have spent far too long dismissing the context of human behaviour as just that: it's often simply referred to as 'the context'. She sets out to entertainingly chart the 20th-century history of research into how where we are shapes who we are.

It's a timely volume given the current level of interest in the relationship between buildings and health. I've written previously about the NHS's new Healthy New Towns initiative, which possibly counts as being the first proactive health strategy ever conducted by Britain's health service. My own business, HAB, signed up to it since we've long believed that housing schemes with rich public realm and plenty of greenery get people healthier. Eight years ago we did some research with the now-defunct Commission for Architecture and the Built Environment to measure the impact of fruit trees, edible hedgerows and other delights of public-realm design on one of our schemes. They had developed a Green Infrastructure Valuation Toolkit with DEFRA and the Horticultural Trades Association. The initiatives that we put in place included rainwater storage and swales for flood prevention, fruit and nut trees, play-spaces, an allotment and polytunnels for food growing. The extra cost for all these measures came to about £50,000 and yet the toolkit showed that we added about ten times that to the value of the scheme in the way we alleviated financial and load pressure on the local physical infrastructure (drains, for example) and social infrastructure (health benefits, dependency on social services and so on).



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Of course, the value of good quality public realm shouldn't be only measured in terms of financial returns. It should be measured in our well-being, too. Our minds and our bodies (they are linked after all) are powerfully affected by what we perceive as our surroundings. It's well established that environments with limited sensory stimulation, like prison, for example, are places where the human body begins to mimic the symptoms of many conditions such as stroke or macular degeneration.

By turn, the better our surroundings, the better we are. Between 1971 and 1982, the eminent researcher into the relationship between environment and healthcare, Dr Roger Ulrich, discovered in an historic piece of research that, of 46 patients recovering in hospital from the same operation, the half who enjoyed a view of natural scenery also recovered more quickly, enjoyed better evaluations and took fewer severe painkillers than the half who had a view of just a brick wall. In a 2006 paper for *The Lancet*, he wrote, 'There is growing evidence »

Feeling peaky? Research shows that views of open countryside have benefits to human health

that higher daylight exposure in patients' rooms reduces depression and pain, presumably via effects on serotonin... Research convincingly suggests that patients experience less stress and pain if they can view nature.'

That's good. Stress reduces the ability of the body to repair and heal itself, not least because our bodies find it difficult to produce serotonin when under duress. And serotonin is the happiness drug that we make ourselves, a key facilitator of many essential physical processes such as appetite and sleep pattern (aiding repair) and a key player in mood.

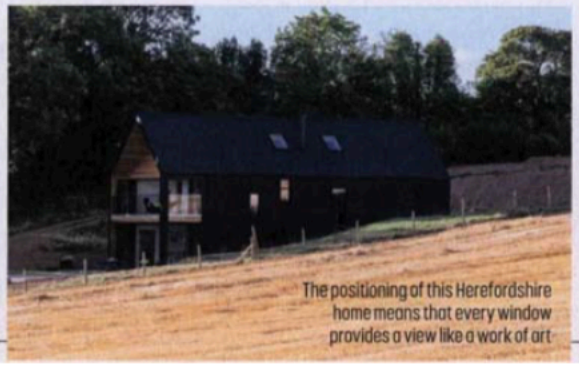
Clare Cooper Marcus, emeritus professor of landscape architecture at Berkeley in California, is a keen hunter of serotonin and was an early enthusiast for Ulrich's research. She has designed hospital gardens as well as conducting further in-depth research as to what exactly makes the best kind of 'healing' landscape. She outlined her results in *Scientific American* in 2012, and they are fascinating. It turns out that we do not indiscriminately prefer any kind of greenery to none at all but are drawn to one particular kind of landscape. So, a flat expanse of lawn that provides very little interest will in turn provoke a weak positive response from us. At the other end of the scale, dense lush planting that mimics a jungle or forest can sometimes have a negative effect because (it's thought) it reproduces conditions in which our ancestors felt under threat from hidden attack. It seems our forebears who, until just a few thousand years ago, were hunter-gatherers for up to a quarter of a million years, preferred the middle ground.

'Create complexity at the detailed level with a mix of planting that is tactile and fragrant'

They felt most comfortable in relatively open landscape with a view of the horizon, an opportunity to quickly run to flee danger and the prospect of shelter under a tree or few, where there might be fresh water.

The commonly used term for this type of landscape is savannah and in its most perfectly developed form it takes shape as the rolling English parkland made so popular by Capability Brown in the 18th century. Lily Bernheimer refers us to the researchers Rachel and Steven Kaplan, who, from the 1970s onwards, identified this kind of landscape as the right blend of four important qualities: coherence, legibility, complexity and mystery. Together they make the recipe for the perfect natural environment for human beings. Cooper Marcus goes further, prescribing the exact ratio between greenery and hard surfaces: 'We found that a ratio of at least 7:3 seems to work best.' If the paved areas increase above 30 per cent they suggest a plaza or shopping mall courtyard.

So there you have it. The perfect recipe for your 2019 garden layout. Or your hospital grounds. Or any piece of public-realm design. Take a minimum of 70 per cent shrubs and trees and no more than 30 per cent paving. Throw in a legible water feature in the distance. Avoid abstract sculptures (they don't soothe people who are sick and worried) and go for coherence. Create complexity at the detailed level with a mix of planting that is tactile and fragrant. And allow your open space to be populated by birds, insects and human beings to provide the most magical and reviving quality of all: mystery. Do all this and the serotonin will begin to flow and you will have made a happiness garden. GD



The positioning of this Herefordshire home means that every window provides a view like a work of art

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