Changing buildings; building change!

This essay has an ambitious aim: to enrich and revitalise our daily work. I hope to do so by encouraging change in our work environment. Strikingly simple, perhaps, but sometimes simple solutions are best — and most easily overlooked.

To begin with, consider the term ‘built environment’ — ‘architect-speak’ for the structural landscape that surrounds us. Architects think of the built environment as more than a pile of bricks — and rightly so; buildings are considered in terms of form, function, spaces, and textures. Ask an architect to define ‘the built environment’ and they will get quite excited, as if they are talking about a spiritual entity. Do they know something we don’t?

The answer rests with Florence Nightingale, pioneer of the ‘new’ healthcare environment. She found that recovery from illness could be improved by introducing light and fresh air to the previously dank, dark spaces of the early hospitals. The results created the template for ward design for the next century.

Some 100 years on, the principle behind the Nightingale ward layout was tested by Ulrich. He found that recovery from surgery could be hastened if patients had access to a window with views onto a natural landscape. This single study triggered further research addressing the following questions:

• How does the built environment influence the ability to cope with illness?
• Is there a psychological basis for the effect of the built environment?
• Can the effect be illustrated in terms of clinical, and other meaningful, outcomes?

How does the built environment influence the ability to cope with illness?

The key word here is stress. Ulrich suggests that the built environment can contain features that are stressors in themselves. Some consider loss of control to be the basis of threat. Taylor suggests that the increased use of computers may serve to further alienate patients, reducing them to a purely functional perspective, leaving them ‘resistant to human imprint’, depersonalised, ‘hardened’. Ulrich suggests that the built environment can contain features that are stressors in themselves. Malkin7 suggested that loss of control, that provides distraction and that is, quite literally, enlightening, enhances the ability to cope with illness.

Environmental psychologists suggest that current healthcare design reinforces the power imbalance between physicians and patients, with expectant adverse effects on the interaction between them. Malkin suggested that medical offices have been designed from a purely functional perspective, leaving them ‘resistant to human imprint’, depersonalised, and cold. The resulting architecture alienates and intimidates, reducing the adult to a helpless child. Helplessness is accelerated when physicians are protected by a fortress-like desk and an imposing chair from which to deliver care. Helplessness is accelerated when physicians are protected by a fortress-like desk and an imposing chair from which to deliver care. The stress of illness by not providing spaces for family support. Simple enough, but often forgotten. And what about distraction? Now it is widely accepted that symptom perception can be ameliorated by positive distraction. Positive mental states can be generated by colour and access to natural light, rather than fluorescent lighting which, curiously, registers as darkness to the human brain.

Some consider loss of control to be the basis behind architecturally induced stress. Taylor proposes that control enables the individual to attain a ‘sense of mastery’ over the unpredictability of illness, facilitating coping and potentially improved clinical outcomes.

In summary, an environment that fosters control, that provides distraction and that is, quite literally, enlightening, enhances the ability to cope with illness.

And yet this understanding has not translated into practice. Is this because we think that coping with illness happens ‘outside’, beyond the confines of the surgery? I would like to suggest that coping begins from the very moment of symptom awareness. The journeys to the surgery, the wait in the waiting room, the consultation and beyond, all influence how patients cope with illness. The built environment is there every step of the way — it cannot be ignored.

Is there a psychological basis for the effect of the built environment?

Yes, and it’s called architectural determinism, the premise being that behaviour is shaped by the environment, which provides ‘cues for behaviour’. To make this a bit more real, consider this: why do dogs howl when they arrive at the vet? Could it be that they associate the smell, sight, and sounds of the surgery with fear, pain, and loss of control? Are we humans any different? Does poor design create the same agitation among our patients?

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A chaotic consulting room may raise doubts in patients’ minds as to the doctor’s ability, suggesting that they may be similarly chaotic in their care provision. Malkin also suggested that the increased use of computers may serve to further alienate patients, reducing them to simple numbers.

References
In short, perceived loss of control, negative behavioural cues, and depersonalisation form the psychological basis behind the effect of the built environment. Supportive, or therapeutic design as it is sometimes referred to, seeks to redress this balance (Box 1).

Can the effect of the built environment be demonstrated in terms of clinical and other meaningful outcomes? Firstly, let us look at clinical outcomes. Lawson and Phiri conducted a 3-year study assessing the effects of the built environment on clinical outcomes. Psychiatric patients in a refurbished hospital ward had shorter hospital stays (14% shorter), and orthopaedic patients required less analgesia when compared with patients in a conventional ward. In addition, on the basis of staff reports, aggressive outbursts among psychiatric patients were fewer in the refurbished ward; rates of recovery were also reported as better for those psychiatric patients in the refurbished ward (79%) versus the conventional ward (60%).

A comprehensive systematic review on the effect of noise, light, and colour on various patient states mediated by a calming environment. Curiously, the effect of the environment seems to extend to a cellular level, with improved immune function. It is the old ‘mind–body’ thing, now redefined as psychoneuroimmunology, or PNI. The environment provides interesting reading. Although encouraging, more research is needed to demonstrate this effect.

Apart from purely clinical endpoints, a study looking at patient perceptions of the built environment provides interesting reading. MacRae found that patients appear to have more confidence in their care when they are in attractive, calming environments. Importantly, she also found that patients regarded the built environment as important. Furthermore, the environment is regarded by patients as a key arbiter in the final judgement about overall satisfaction with care.

Implications
Communication stemming from a healthy doctor–patient relationship improves patient satisfaction, concordance and, hence, clinical outcomes — that much is a given. How can we hope to achieve this if the existing built environment creates, to quote Malkin, a ‘reluctance to seek help’, ‘a power imbalance’ with ‘adverse effects on interaction’, ‘helplessness’, and ‘alienation’?

Our study (J Mizan, unpublished data, 2004) explored what would happen if we broke with traditional consulting room design. It suggests that a supportive environment enhances verbal and non-verbal communication, facilitated through a reduction in anxiety, and a new and more equitable doctor–patient interaction. Shared decision making is also improved. These outcomes seem altogether more wholesome.

And yet, only last week I visited a newly built surgery that looked like a block of concrete. Why so? Perhaps there is pressure for these projects to be ‘done and dusted’ in time for the next general election. Cynical perhaps, but there seems to be a ring of truth to it. There is also no clear concept of optimal design for primary care, through lack of research. And, finally, I suspect that there is a lack of awareness among stakeholders of the importance of the built environment. And so it is ignored in the rush to get the new building complete.

None of these issues is insurmountable. Already a new unit dedicated to researching this area has been established at King’s College — the Healthcare Design Research Unit. It cannot do this work alone. GPs need the support of healthcare professionals, the government, and indeed the entire healthcare community. None of these issues is insurmountable.

And what of research on the built environment and primary care? There is very little. Some work is ongoing in the US, but elsewhere this area has hardly been touched — now that is surprising.

One parting shot — if we are going to work in the same place for the next however many years, shouldn’t it be where we enjoy working? A place that subtly influences each and every consultation to work in our favour, that improves patient satisfaction, and our job satisfaction. It can be just that. The ball is in our court.

Jacques Mizan

Box 1. A guide to therapeutic design

The consulting room
• Consider the patient as a guest, not an inmate
• Maximise natural lighting — large, uncluttered windows; minimise harsh fluorescent lighting — use soft uplighters and dedicated task lighting instead
• Bring nature into the room — plants, pictures, views
• Use warm paint colours and simple natural textiles on furnishings
• Provide comfortable ‘same level’ seating for all
• Ensure shared access to a low-profile computer monitor
• A chaotic room suggests chaotic care — get organised!

Waiting room
• Avoid seats in rows — small circular clusters work best
• Empower your patients through interactive IT facilities
• Have an open, low-level, curved reception counter not a high counter with barriers
• Consider a ‘therapeutic’ garden for relaxation and gathering of thoughts

Staff spaces
• Provide quiet space far from the madding crowd — no phones, no computers!
• Incorporate ‘bump zones’ into building design — circular design rather than offices off long corridors means that people will see and ‘bump’ into each other allowing for opportunistic contact

Learning space
• Aim for a dedicated learning space, not a bookshelf in the coffee room
• This should double up as a meeting room taking, care to avoid large conference desks
• Make it a healing space too — people learn better and better decisions are made in such environments