

Leading by Design – A Case Study

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The motivation for his work comes from his extensive and diverse experience in clinical practice – having worked in a variety of health settings, both primary and secondary, urban and rural, UK and internationally - as well as his own research informing the growing evidence base around optimally designed environments. Current opinion on design of healthcare facilities is limited by the fact that it is supported almost exclusively by hospital - based research. It might well be that in the hospital setting supportive environments improve healthcare outcomes, performance and efficiency of service providers, job satisfaction, recruitment and retention of healthcare professionals: the case for primary and community care facilities remains unproven. Indeed, the optimal form and function of community facilities is as yet unclear. Dr. Mizan’s work to date, supported through numerous grants (EPSRC “Designing for the 21st Century”, NHS Pathfinder Research Awards, London Centre for Arts and Cultural Enterprise Award) has gone some way to delivering a robust evidence base to inform primary and community based facility design. Future projects will build on this through further research, extensive community engagement and novel cross-disciplinary partnerships, training and education. Through such work, the design and delivery of systemic, sustainable and life enhancing facilities for all, might become a reality.



THE SPACE WORKS
DEVELOPING QUALITY HEALTHCARE THROUGH DESIGN

CASE STUDY – CONTENTS

1. Introduction and Background.....	2
2. Leading By Design – Attraction and Opportunity.....	4
3. My Work and Leading By Design.....	5
4. The Future.....	11

Introduction.

One has to ask why a General Practitioner might come to be interested in the design of healthcare environments? How could it be relevant to daily practice? I hope that by the end of this presentation you will be able to see that the environment of healthcare is as important – if not more so – than the writing of a prescription.

This work is an example of action research and reflective practice. The report sequentially outlines:

- What I learnt in Leading By Design
- What I did with the learning
- What I learnt from what I did, and
- How I applied the new learning to my next project

In this way it is hoped that the reader might be able to understand the dynamic and iterative process that is central to the Leading by Design concept.

Background.

It all began when I was training as a junior doctor. People are familiar with the hours that doctors work, but less aware of the conditions that they work in. Many of my non-medical friends were surprised when they came to visit me in the stark surroundings of an On-Call room (Fig 1). Indeed, I was often stunned by the poor environments despite working in many different hospitals in different countries.



FIG 1. The On-Call Room

Somewhat naively I thought this bleak environment applied only to the hospital setting – so I entered the world of family practice, only to find that things were much the same! (Fig 2)



FIG 2. Family Practice

And yet – all around me – were vibrant and exciting work spaces. I experienced most of these through attending conferences in plush hotels but I also experienced these first hand when I joined the pharmaceutical industry for a few years as a research physician. I worked at the global HQ of AstraZeneca – the site is set in rolling countryside and the offices are bright, spacious and interactive. The same question kept coming back to me every time I experienced a great work space (Fig 3) – why can't healthcare environments be like this? How can I change them? And would that

make a difference to the healthcare experience and ultimately to healthcare outcomes in primary (ambulatory) care?



FIG 3. Supportive Environments – Corporate Sector

And so my journey began. I set about trying to find the answer to these obviously important questions. I spoke to many of my wise colleagues - I explored the literature – and I kept coming up against a remarkably fixed mindset, not only from healthcare professionals but from patients as well. The accepted view was that healthcare was all about making the right diagnosis using the right evidence, appropriate investigations and prescribing the right treatment. Environments had little part to play in all of this – I should forget about it and go back to being a doctor.

But to me, something seemed wrong – something was missing. For all of these steps to work something had to happen first – there needed to be good *communication*. And for communication to be optimal, the physical environment needed to be optimal. I needed to prove this very point in the only way I knew how – by doing an experiment.

The experiment was quite simple. I set about transforming an inner-city family doctor's room using basic principles of supportive design and evaluated the effects on both patient and doctor (Fig 4).



FIG 4. The Experiment – before (left) and after (right)

The results spoke for themselves (see www.the-space-works.org for full report) – people felt less anxious, shared and asked more, felt more empowered in managing their illness, and the doctor felt less stressed and enjoyed his work more.

True – this was one study with limitations – but it spurred me on. I needed to do more research, I needed to find like minded thinkers. I had come across Wayne Ruga’s name in much of my literature searching – so I contacted him and, over a coffee in a café in Manchester I was introduced to the early principles of Leading By Design.

Here’s what I learned about Leading by Design (LBD):

At its core, LBD was about creating something called “generative space”.

“Generative space is a place – both physical and social - where the experience of the participants in that place is one that both fulfills the functional requirements of that place and it also materially improves the health, healthcare, and / or quality of life for those participating in that experience in a manner that they can each articulate in their own terms.

Additionally, and by its very nature, a ‘generative space’ is a place that progressively and tangibly improves over time.

The purpose of cultivating ‘generative space’ is to improve performance effectiveness. Depending upon the interests of the particular individual, the organization, or the community – the measurements of effectiveness will vary. However, in all cases, whatever these measures are – they will be used to encourage, support, and reinforce increasing performance effectiveness in health, healthcare, and /or quality of life.

The goal of understanding how to cultivate ‘generative space’ is to be able to produce it consistently, reliably, and predictably across the full range of life’s contextual situations – including our personal lives, our professional and organizational work; and throughout the vast spectrum of our community engagements.”

Wayne Ruga

There are five domains in LBD comprising 22 elements – it is a complex and constantly evolving hypothesis and is presented in greater detail elsewhere on this website.

This early learning resonated strongly with my understanding about doctor-patient communication; that it worked best in a generative space. *However, I had learnt some new things*: that it was not only the building that mattered, it was something about the people within the space and that generative space was not confined to a room – it needed to permeate through all aspects of personal, professional and community life.

Putting these principles into action was facilitated by my being awarded an Engineering and Physical Sciences Research Council grant as part of the “Designing for the 21st Century Award” (www.epsrc.org). This initiative called for the creation of “research clusters” – groups of people from all disciplines gathered together to explore a specific issue.

Having received the award I set about planning the cluster activities. *The planning was informed by the principles of LBD*, as underlined below:

- To deliver the best outputs from these groups, the meetings would need to be held in generative spaces ie: stimulating and supportive physical environments.
- Outputs could be generated quickly by thinking through doing ie: action research
- Group work would need to engage with the community and consider and meaningfully incorporate cultural and lay perspectives
- Outputs would need to contribute to an evidence base upon which to inform future design
- The work would need to focus on generating outcomes that would be systemic, sustainable and life enhancing
- Activity would ripple through personal, professional and community projects

As a direct result of this focussed brainstorming, and through regular discussion with Wayne (an integral part of the LBD process), I designed and delivered a number of projects.

What was different about these projects was their notable deviation from traditional scientific method ie: randomised controlled trials etc. The outputs were, however, much more valuable and informative.

I will describe 2 of the projects in greater detail here. The remainder can be found on The Space Works web site. Once again, where concepts from LBD have been used they will appear underlined.

i. Focus Groups

These workshops were to be a classic example of mixing old and new methods of enquiry. I wanted to bring a cross-disciplinary group of people together to discuss healthcare design. However, it would need to be quite different in format if it was to incorporate LBD principles. I decided to use the Future Search methodology as

proposed by Weisbord and Janoff. This unusual approach – a paradigm shift from standard methods of enquiry - relies on bringing every member of the community together, identifying some common ground – organisational, personal and historical, discussing future trends and subsequently bridging back to the present. Options and solutions are then experimented with, taken apart, re-built, until the best fit solution is reached.

The focus group work generated a number of creative options for health centre design. The novel process yielded some informative insights:

- That design needed to be mindful of socio-cultural values
- That the built environment should reflect a holistic approach to healthcare delivery
- That supportive environments were important to all users
- New areas of research emerged
- The real value of staff and user engagement – when done properly – was immense and needed to be reflected in future work

All of these points can be found within the 22 elements of LBD, as illustrated in Table 1 below:

Table 1: New Learning from Focus Group work and the relationship of these outputs to Principles of LBD

Outputs	LBD Principles
Importance of social and cultural aspects of design	Technical versus adaptive design
Design to reflect Holistic health care	New understandings in health
Supportive environments	Structure in design
Identified new areas of research	Evidence base
Value of staff and user engagement	Leadership

It was through reflecting on the process and outcomes of the focus groups that I began to shape the next project.

ii. Southwark Arts Project

Recognising the potential of community engagement and the challenges of delivering systemic and sustainable change within a cash-strapped NHS, I began to question where I might find freely available community resources to inform healthcare design. Furthermore, if this next project was to fit with LBD it would need to deliver something tangible, and life enhancing. Could I do something which would result in an outcome which was life enhancing for the participants and through this it might in and of itself become self perpetuating ie: systemic and sustainable?

Here’s what I did - this really is a reflection of the next step in the reflective practice cycle integral to LBD: applying new learning.

I linked up with Southwark Arts Forum an agency working in partnership with Age Concern (UK) and which runs art workshops throughout the borough of Southwark. The workshops bring older people together (Fig 5) and, put simply, they spend the

day making art. One of the problems they have is that they have nowhere to display their art work, which has been understandably frustrating for the artists themselves.

I engaged with the artists themselves, brought in 2 artists – both locally trained – and looking for experience working with older people – and found a local family practice that would be willing to display the finished artwork. Sustainability issues were addressed by accessing a local re-cycling centre which had a massive warehouse of discarded items from all sectors of industry. In this way we were able to source quality fabrics etc at virtually no cost.



FIG 5. Artists – Southwark Arts Forum

FIG 6. Sustainable Resource Centre

Informed by my earlier learning, I emphasised in the brief to the artists that the end product would need to reflect local culture. As most of the older people involved were from the West Indies, they were invited to bring in an article that reminded them of home, so linking in with a basic principle of supportive design – to ease anxiety through more homely environments.

The end product was a truly delightful tapestry which now graces the waiting room of a deprived inner city practice. It was without doubt life enhancing for the artists, who thrived on the project. The artists were spurred on to do future projects with this group, it was warmly welcomed by the family practice in that it helped create a supportive environment for patients, and was sustainable from a practical and economical perspective. In all these ways the project had been a success, fitting in with the EPSRC brief and informed by LBD principles.

I had learnt from this project that:

- Community engagement is attractive though complex driven by multiple, often conflicting agendas
- There was a wealth of local resource out there, eager to be tapped
- Engaging with key workers in primary care remained difficult.

It was this learning that was to shape the format of subsequent projects, full details of which can be found on The Space Works website.

Thus far my work – and this narrative - have focussed on projects outside my own professional practice. Central to LBD is the extension of the LBD principles to **personal, professional and community lives**. I will now present how LBD – specifically the concept of generative space – found its way into my consulting room and into the interactions between me and my patients.

Much time in undergraduate medicine is spent learning about communication. However, it is all at something of a superficial level – the focus is on eye contact, using simple terminology and trying to understand the patients’ ideas concerns and expectations. By contrast, an understanding of generative space results in a much more meaningful understanding of exactly what good communication really is.

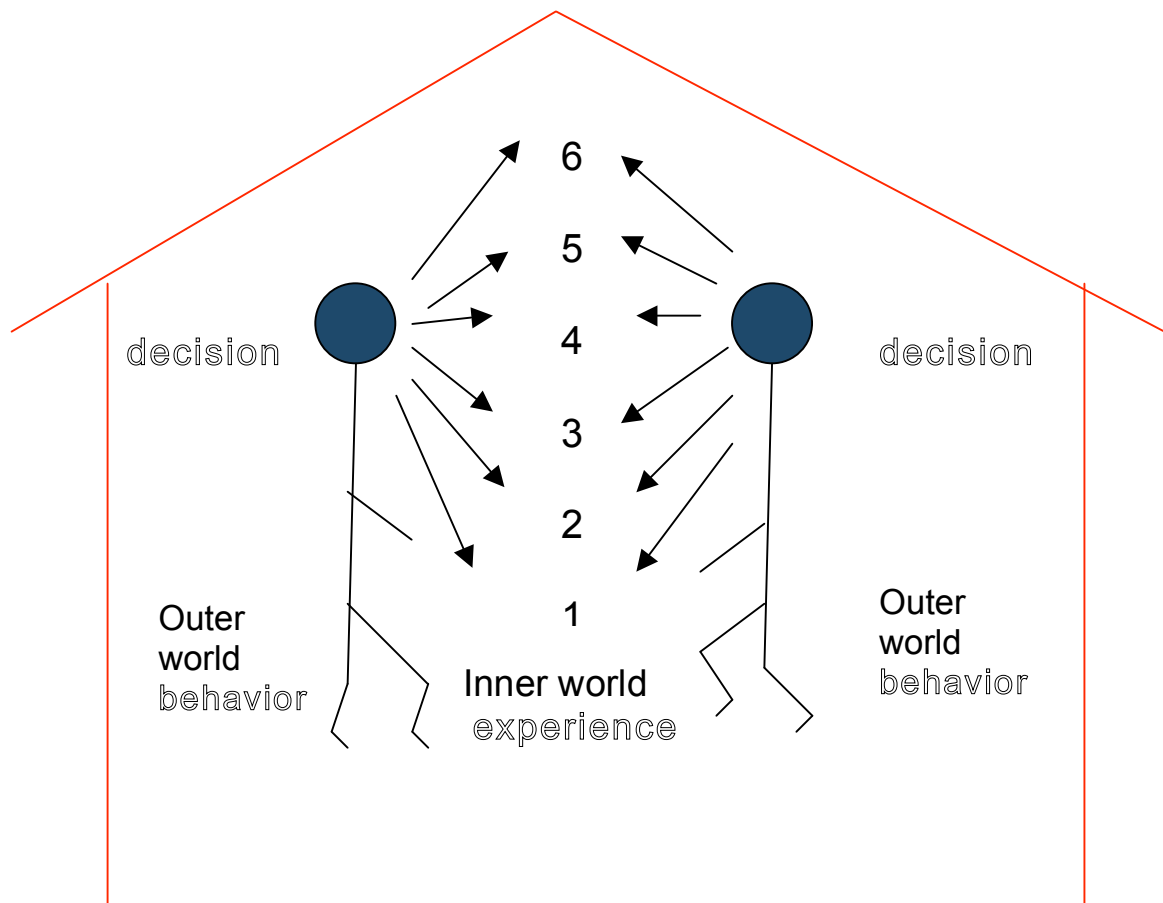


FIG 7 Generative Space: Levels 1-6 represent varying levels of engagement with Level 1 representing basic social engagement (greeting) and Level 6 representing full engagement with social and built environments. Generative space also requires an appreciation of the inner world experiences, values etc of both parties and responsiveness to visible behavioural cues. © Wayne Ruga

Figures 8 – 10 illustrate how I operationalized this learning in real terms.



FIG 8 The Amazing Flying Pig



FIG 9 Creating a supportive environment



FIG 10 Linking with the past – Vintage postcard of local area.

The Flying Pig is not as simple as it might seem. It took some time for me to find it and to know it was the right thing to introduce into my consulting room. I chose him (definitely a “him”) because of two things 1) He represents a fantasy – and many of my patients, living in desperate poverty, find escape through fantasy. Displaying the flying pig in my room is a statement that links me to them – it says I too have fantasies – and I too share the frustration that they have sometimes when battling with the world around them. And it works across age groups – for children his presence and gently flapping wings transforms the consulting room from a scary place to one of fun and mystery. It has transformed my consultations with children. **The vase of flowers** again is a simple statement – it shows that I can be touched by natural beauty– I am human – so you can share your thoughts and concerns with me. **The vintage photograph** is a perfect ice breaker – an instant connection to the older patient.

Perhaps only a robust research study will confirm whether this new space is making a difference in terms of its influence on healthcare outcomes. Indeed, I am doing this research. In 2003 The Department of Health funded The Space Works to do 2 research studies, one of which has just reported (a large mixed methodology study of patients' and healthcare professionals' perspectives and priorities on the built environment) and another of which has just entered its second phase (a pre and post study on the effects of a supportive environment in a children's community centre).

However, such "hard" evidence is not everything - the "softer" evidence of the effects of generative space are notable and should not be ignored. In my day to day work I have noted patients often report, without prompting, that "there is something about the room" that makes it feel different – others report that is very calming, and make a point of stating that it is not just me – it is the space itself. Patients tend to come back to me more than they used to for follow-ups – yet nothing has changed apart from the space itself. And my consultations have clearly become longer – I used to pride myself on running to time but now I seem unable to stop people talking! Stranger still, I find the administrative staff using my office to do their paperwork, when just around the corner there is a dedicated – stark and cold – office just for admin work. And one of my colleagues has tentatively introduced an up-lighter to his room – it is only through knowing him that you would appreciate how bold such a move really is.

These seemingly small changes, and the ripple effect that I see happening around me, reflect the nature of generative space – rather than deteriorating with time, as many new spaces do, it tends to become richer and more supportive over time.

The Future.

My journey has really only just begun and indeed the whole concept of generative space in healthcare is a work in progress. In the **short to medium term (2007-8)** I aim to further operationalize and evaluate the LBD concepts through the creation of real and virtual healthcare spaces. I intend to create a real working model practice within which to test and experiment with the ideas of LBD and generative space. Alongside this, innovations in computer technology and virtual design will be explored to develop and test new concepts in health centre design, perhaps later transferring these into the model practice.

In the **longer term (2009 and beyond)** I hope to:

- Develop and disseminate a portfolio of action research
- Develop and deliver educational initiatives across disciplines
- Establish a business focus for The Space Works
- Become recognised as the leading authority of how primary care environments can improve outcomes.

I would like to close with a quote , which, to me, encapsulates the principle of generative space and Leading by Design – if this narrative has achieved its purpose, then it will make instant sense to you:

"It's not what you look at that mattersit's what you see."

Henry David Thoreau

