



Stop that person

Strategic value and the design of Public Spaces.

By **Tim Stonor**

Our public spaces are beginning to receive the attention they deserve. But do we have the right tools to create the spaces that we want? The key to a dynamic space, argues Tim Stonor, is in its 'static' people.

Interest in the public realm is at an all-time high, as is evident in the press¹ and in the growing number of policy documents being published by the government and local authorities. To date, most efforts have focused on promoting people-friendly streets. However, with a number of successes on that front, attention is turning towards parks and squares. The question on the minds of many has once again become: how can we design successful public spaces?

Current design guidelines tend to follow two basic approaches. First, they focus on the design process, emphasising, for example, the importance of stakeholder consultation or historic research. Second, they focus on design features, emphasising the amenities that a new public space should provide – adequate and comfortable seating, attractive landscaping, entrances with good visibility, sufficient enclosure, active edges, multiple activities and so on.

Both approaches make a fundamental assumption, which is that design intentions can be straightforwardly transformed into design outcomes – that the places we create will work as

we want them to, that people will use them in the ways we envision, that we will get what we paid for.

Unfortunately, there is little evidence to suggest the process is so simple. Why do so many squares, mixed-use developments, and residential areas (particularly public housing estates) fail to ever resemble artists' drawings in the planning applications and consultation brochures? How do projects that win architectural awards regularly become sinks for crime and anti-social behaviour within a few years of being built?



Figure 1 : *One Old Change in the City of London*



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If we bought a television that only picked up two or three channels instead of them all, we would take it back. If we employed a tailor to sew a bespoke suit that did not end up fitting, we would demand a refund. It is slightly more difficult to return public space, though there are plenty of occasions we would like to do so.

We believe, then, that the creation of a successful public space is not only a matter of process and content. What really counts is how it operates.

Understanding The Needs Of The User

One development in urban practice that may offer fresh hope for the design of better public spaces is the growing realisation that designers have to pay closer attention the needs of the user. On the face of it, this can seem daunting. Which user should I design for? Aren't people all different? How do I collect this information?

Research into the ways that people use space, pioneered by people such as William H Whyte in the USA, Jan Gehl in Copenhagen and Bill Hillier in London, offers a way through the problem.

Using first-hand observations of human activity, Whyte, Gehl and Hillier have drawn attention to the importance of stationary or 'static' activity in public spaces – i.e. people who have chosen to stop moving and spend time there simply sitting or standing. They each say that such activity is far from trivial but is, instead, a clear sign of public space success.

As Hillier puts it, '[s]tatic people are probably the single most important component of a "spatial culture". If people are static in urban space it is because something has happened to make them stop: they have seen something to

look at, or met someone to talk to, are buying something, or have found a place to sit, or perhaps have simply taken up a vantage point from which to watch the world go by. If nothing but moving people could be seen, then a significant element of the spatial culture would seem to be missing!² Whether in greater or lesser degrees, stopping activity is one of the key performance indicators of any public space and should be encouraged.

Unfortunately, it seems that the potential to induce stopping is one of the least discussed and least understood aspects of public space design. It is certainly not the typical subject of interest for footfall-concerned retail consultants and movement-focused highways engineers. However, each activity – moving or stopping – is only important in light of the other. The key thing is to understand the relationship between the two.

This relationship has been extensively studied by Hillier and his colleagues at the UCL Space Syntax Laboratory and by my company, Space Syntax Limited. By watching carefully how people move and where they stop across a broad range of urban areas, we have been able to identify the physical design characteristics of streets and public spaces that most influence their use.

For example, more people prefer to take simple routes through towns and cities and their public spaces. They avoid layouts that are labyrinthine and spaces that are too cut off. They choose more often to walk through accessible spaces than inaccessible ones. They pass by overgrown entranceways, and choose open over closed gateways.

As for stopping behaviour in public spaces, more people tend to stop in locations that afford the best all-round views.

This spot is usually the place that not only has the best views of the space but also the best views out of the public space. People therefore like *disclosure*¹ as well as enclosure in a public space. This is a lesson we applied in the design of Trafalgar Square.

Forecasting Space Use – The Importance Of 'Strategic Value'

The most significant product of our 'space syntax' research has been the development of quantitative techniques to forecast movement flows and use patterns in new public spaces. These techniques have been used to help create some of the UK's most successful public spaces including Broadgate in the City of London, Brindleyplace in Birmingham and Trafalgar Square in Westminster.

One of these techniques is called 'Strategic Value' analysis. It begins with the creation of an 'axial map', which is a map consisting of all the possible lines of pedestrian movement that pass through an urban area – down streets, through walkways and alleys, across parks and squares.



Figure 2 : Axial map of central London showing all possible lines of pedestrian movement.

These lines are subject to mathematical analysis to calculate which are more accessible (or 'spatially integrated') in the overall movement network and which are less so. The lines in the map are then colour coded according to their spatial integration value in order to graphically display the results of the analysis.



Figure 3 : Processed axial map of central London showing relative levels of spatial integration for all possible lines of pedestrian movement. Lines in warm colours are more spatially integrated, lines in cool colours less so.

Any particular public space is likely to have more than one line of movement into or through it, each with its own spatial integration value and each bringing a correspondingly higher or lower volume of people through the space. The Strategic Value of a space is defined as the sum of the spatial integration values of all the lines that pass through its heart.



Figure 4 : Map of the area around St. Christopher's Place in central London (outlined in grey), showing lines of pedestrian movement. Lines in warm colours are more spatially integrated, lines in cool colours less so.

In real street networks, spatial integration values are important because they consistently correlate with observed movement patterns: more people move along integrated routes, fewer on segregated ones. Thus, squares and parks with relatively higher Strategic Values tend to feature relatively higher levels of pedestrian movement. More interestingly, Strategic Value has an even better correlation with static activity.



Figure 5 : St. Christopher's Place in central London

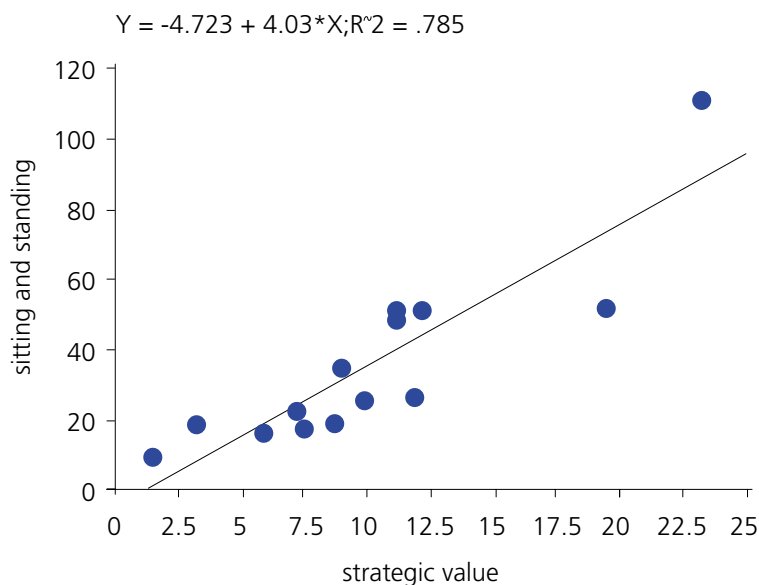


Figure 6 : The blue dots in this statistical 'scatterplot' represent the 15 London squares observed. Each dot is plotted according to its measurement for Strategic Value (along the horizontal axis) and observed static users (along the vertical axis). As Strategic Value increases from left to right, the number of observed users can be seen to increase from bottom to top, indicating there is a good relationship between the two factors.

Results from London and Copenhagen

Recent work in London illustrates this relationship. Studies covering 15 public spaces – including Fleet Place, Market Place, St Christopher's Place, and Neal's Yard – were undertaken between 2000 and 2003. In these studies, observers took hourly samples of static activity (people standing and sitting) in each space: crucially, this excluded people at restaurants and cafes, focussing only on people making 'informal' use of the spaces.

The Strategic Value of each space was also computed, and then the two measures were compared. We found that the level of Strategic Value for each space accounted for 79% of the variation in levels of static use. Of course, many other things influence the use of a public space, but these results show that the embedding of the space in its surrounding context is the dominant characteristic.

And these results do not appear to be limited to London. Using observation data gathered by Jan Gehl, we have found a similar relationship between Strategic Value and static users in Copenhagen squares.

A Return to Successful Places?

Thus, if we see that the measure of Strategic Value closely corresponds with static people, and static people are the basis on which the proposed uses in urban spaces succeed or fail, it makes sense that we should pay attention to Strategic Value in the design process.

This is not to say, however, that we should only place squares and parks in locations with high Strategic Values, as not every space must be teeming with people. If the aim is to create a quiet space then it should be located where the Strategic Value is low. An important aspect of this design tool is that it is strongly analytic and weakly prescriptive. The only prescription we would offer, referred to earlier, is that a space should be able to function as we would like it to, and this often means at least some stopping people.

Greater stakeholder input and the right mix of physical features are both necessary for creating better places, but they do not seem sufficient. Many housing projects, hospital layouts and town centre retail projects have failed and continue to fail, but not for lack of careful research, good amenities and high hopes.

The UK's heritage of once-great Victorian parks shows that we have been able to achieve success in the past. Yet the windswept plazas of modern town centres, the sterile emptiness of many new spaces in the City of London and the unused playgrounds of countless housing estates is a more vivid and more recent legacy.

What will the future bring? We hope for more, better spaces that are used as they were intended to be. That, for us, will be success.

¹The growing interest in public space was apparent in the last issue of this journal. Interviewed in 'Property Beyond Profit', Stuart Lipton, former Chairman of the Commission for Architecture and the Built Environment, remarked 'The creation of high quality public spaces is every bit as much part of this process [of creating successful places] as good building design.'

²Hillier, Bill. Mansion House Square Inquiry: Proof of Evidence. Commissioned by Peter Palumbo (1984), p. 5-6.

³I am grateful to my client, Alastair Mellon, for adapting the term to this use.

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