



# Effects of Temporary Markets on Spatial Inter-relations: A behavioural analysis of a public realm in the UK

Ali Cheshmehzangi, Tim Heath

Faculty of Engineering, Department of Architecture and Built Environment,  
University of Nottingham, United Kingdom

*laxac7@nottingham.ac.uk*

## Abstract

This research focuses upon the socio-environmental dimensions and urban identity of urban environments by evaluating human behaviours and space-to-human relations. In addition, approaches to urban re-branding will be analysed to evaluate the role of engineered identities in enhancing social integration. This particular study will focus upon the installation of temporary activities into the public realm and the impact that these can have upon perception, identity and activity within public spaces. A case study of temporary markets taking place in Nottingham's Old Market Square in the UK will be evaluated to explore possibilities of maximising the potential of urban space.

**Keywords:** human behaviour, urban identity, spatial inter-relation, socio-environmental

*eISSN 2514-7528 © 2017 The Authors. Published for AMER ABRA by e-International Publishing House, Ltd., UK. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>). Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia. <https://doi.org/10.21834/jabs.v2i3.190>*

## 1.0 Introduction

*'The nature of environmental images may become better understood, the link between images and behavior better elucidated, the mobility of city dwellers better documented, and the nature of human territoriality better defined, all within the bounds of mainstream social science'*. (Walmsley, 1988, p. 158)

The long time scales of developing urban identity coupled with the short intense bursts of design input into the urban environment require an empirical approach to be adopted if successful and failed attempts to sustain city identity are to be analysed and transferred to other places. This research analyses the human behaviours and spatial qualities in respect to temporary activities in an urban space. This research paper will explore various layouts for the temporary markets to verify the best possible pattern as an identity producer rather than a random arrangement. This study will also evaluate the impact of the physicality of these events on human behaviours to maximise the potential of such programmes in urban space. Finally, this paper would suggest possibilities of better spatial patterns, to enhance spatial interactions and revive urban identities.

## 2.0 Literature Review

### Identity in Urban Context

Within the past few decades, the term 'identity' has grown in popularity in various sectors. Some might suggest that identity is to distinguish 'self' and the 'other'; however it could in fact emphasise the relationship between the self and the otherness. Hogg and Abrams (1988, p. 2) also assert that identity is '*people's concept*' for self-recognition as well as a way to express the linkage to the others. Identity would imply the fact that the relationship between an individual and his society is determined by social categories which define him in his environment (Jenkins, 1996). This is more pertinent when it comes to the meaning of identity in an urban environment.

As it is described in social sciences, identities are mainly '*socially constructed*' (Wendt, 1994); but the authors suggest that these are significantly influenced by the environment and what takes place within it. Therefore, identity in an urban environment is to a greater or lesser degree defined by the environment's elements and activities or events taking place within that environment. Urban identities are meaningful entities to develop the spatial inter-relations and to endorse a relationship between the socio-environmental values and the essence of the space.

It is articulated by Taylor (1989) that the pattern of behaviours is created according to an understanding of self; hence identity is based on social attributes integrating with the environment which could also become indicators of behavioural patterns. This would consequently influence the completion of self in the environment. What becomes important, therefore, is the relationship that identity builds up between human behaviour and the urban environment.

## **Human and His Environment**

Urban environments as Klein (2000; in Neill, 2004, p. 8) argued, are places where our own identities are revived as '*citizens rather than just consumers*'. This could also reflect on the fact that the characteristics of an environment depend on society's outlook and perception. Environment is, therefore, where we configure our outside world and '*the space that we inhabit*'. It is within the environmental framework that the '*spatial organisation of urban society*' determines the pattern of human behaviours; linked to the past (or memory), culture, knowledge and emotions (Walmsley, 1988, p. ix).

In general, we could argue that the perceptual dimension for any environment could play a major role in the behavioural patterns of that particular space. This is very apparent in Kaplan's human behavioural analysis (1973; 1976) which specifies four stages for humans when entering an environment. The first stage is based on the '*recognition*' of the environment and the thought '*...where they are*'; the second stage is based on the '*anticipation*' of a human about the environment and the question of '*...what is likely to happen*'; the third stage refers to '*...whether events will be good or bad*' or in other words the '*generalisation*' of what is taking place; the fourth stage is the natural action of behavioural adjustments or '*innovation*' and is based on '*...what needs to be done about the unfolding sequence of events*' (Walmsley, 1988, p. 20).

It could be concluded, therefore, that people tend to respond to their environment according to their experiences, structuring and information obtained from the space. Accordingly, behaviours could vary depending on what spatial pattern and activities are taking place; as it is the spatial pattern which could modify the stages of perceptual and emotional development for an individual.

## **Spatial Change and Influences on Human Behaviour**

People's understanding of space (particularly urban environments) develops based on qualitative values and changes taking place in that space. This would also mean that '*...it is through experience that the environment develops meaning for an individual. Thus the urban environment is not simply architectural space, rather places become endowed with significance through the actions that are permitted or enjoined with them*' (Wapner et al., 1980, p. 226 – in Walmsley, 1988, p. 51). The importance of memory, experience and time in this evolution of mind indicates the relationship of individuals to the identity of the place. It is the organisation of behaviour depending on qualitative change that supports the development of individual's perception.

In general, as it has been elucidated we tend to correlate our behaviours in respect to various conditions and activities taking place. Thus, any urban environment has the capacity of becoming a collective place, which could promote emergence of a distinctive identity or a '*distinctive subculture*' as Ley (1983, p. 201; in Walmsley, 1988, p. 66) refers to it. In addition, it is the socio-spatial behaviours which represent the variation of actions and thoughts in the space.

The relationship between the spatial changes and the influences on human behaviours

within an urban space therefore demands further analysis. In recent decades, there has been a more comprehensive approach to encourage many of the UK's contemporary public spaces or urban squares to become more flexible. This flexibility – as an additional character - also includes aims to enhance permeability and accessibility of these spaces. These organised alterations in activities or events materialise the meaning and essence of the space differently; some refer to the recognition of the community and the history of the space, but yet some are commercially-based with random layouts.

### **Research Approach: Research Aims and Critical Points**

It has been acknowledged that urban identity is strongly influenced by the spatial inter-relations taking place in urban spaces. This is based upon considering how space-structuring can influence human movement and social behaviour. The theory of a '*phenomenal and a behavioural environment*' (Walmsley, 1988, p. 5) can therefore promote various behavioural indicators with which social values and spatial inter-relations are enhanced. In addition, what takes place in a space is a vital element to the identity and the behavioural pattern of that space. It is also asserted by Walmsley (1988, p. 64) that, '*...human intent and action ascribe meaning and transform empty space into experienced place...with their values and actions*'. In light of this, these research questions will be explored:

How important is the impact of temporary events on the identity of place?

How can the potential of the space be maximised through a consideration of people?

How can the physicality of events be organised to get the best socio-environmental impact up on human behaviours?

### **3.0 Methodology**

This research paper is part of a larger research project focussed upon analysing human behaviours in respect to the events taking place in urban spaces. Only by examining and exploring human behaviours and spatial organisation, can one consider suggesting socio-environmental improvements and better regeneration strategies. For this research paper, only temporary markets (as significant temporary events) are chosen for further analysis; however for the whole research project, similar analysis is conducted the other temporary structures and activities happening in the selected urban spaces.

This research study is undertaken by analysing selected case-studies and the use of qualitative research methods. The main data collection is conducted using the '*unobtrusive observational method*', which tracks human behaviours in space through '*disguised field analysis*'. Numerous repetitions of similar observations are undertaken at different times in order to enhance the validity of the results and suggestions given. The repeated behavioural tracking of the same place with different events and activities are analysed

based on 'evaluative observational variables' to ensure valid conclusions based on collected observations (Babbie, 1992; Brown, 2009). Finally, the research is planned to feature a wide-spread typology of the chosen case studies (with Nottingham's Old Market Square being the main case study for this paper). These features would include: the temporary physical interventions, socio-environmental values, behavioural evaluations, social and environmental characteristics of the place, spatial inter-relations and related identities.

### **Case Study Introduction: Nottingham's Old Market Square**

Nottingham is a 'city and a unitary authority area' which is ranked the seventh largest in the UK (Pointer, 2005). Nottingham is the largest city in the East Midlands region, both in terms of population and size of urban area. The city of Nottingham has a thriving city centre; particularly in terms of its retailing, social attractions and historical elements.



Figure 1: The temporary Big Wheel of the Old Market Square, Nottingham  
(Source: Cheshmehzangi, March 2011)

Nottingham's Old Market Square is centrally located and has long been considered as the heart of the city. The new landscape design for the Old Market Square was completed in 2007, following many critical views about the previous design lacking permeability, flexibility and accessibility. The redesigned square is strategically located in between four anchor points of Nottingham's city centre. These major points are the two shopping malls (Victoria and Broadmarsh) towards the northern and southern part of the city centre; and the two historical nodes (Nottingham's Castle and the Lace Market) which are located at the western and eastern sides of the city centre. The Old Market Square is central to these four

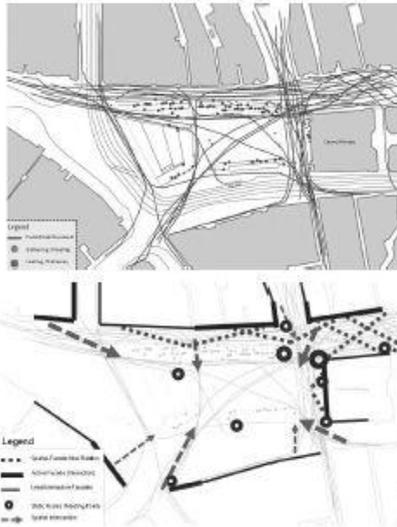
points, creating a constant pedestrian flow as well as acting as a destination in its own right. The new design added significant flexibility to this urban space and helped to recreate the original essence of the square (as a market place) and to create many possibilities for various temporary activities to take place. One of the original and major activities is the temporary markets which happen few times a year for different occasions.

### **Case Study: Analysis**

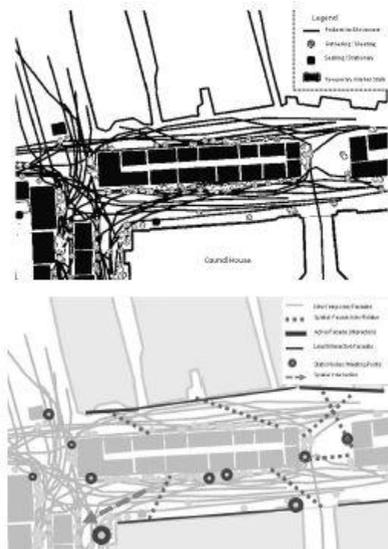
The first phase of this research study is a crafted survey to analyse human behaviour and spatial inter-relations within the Old Market Square while there are no temporary activities taking place. A similar study was undertaken by 'Space Syntax' (Hillier, 2004, pp. 4-9) to trace the '*pedestrian movement*' and the '*stationary activity*' for the previous design layout. The current study would look into the spatial behaviours within the new design of this particular public realm in order to identify indicators for socio-environmental values within this urban space.

Through frequent qualitative research for this public realm, the Council House building (at the eastern edge) and the block of buildings towards the northern edge (mixture of retailing and commercial), appear to be the most dominating edges of the space. The primary movements are alongside these two edges with the central part being the least used space. The Council House remains the major gathering/meeting point while the northern edge acts as a transient route. The number of people interacting with the central part and the water feature (at the western edge) rises significantly in better weather conditions. It was also observed that these places were mostly used by younger people whereas older people were mostly found towards the seating areas and the Council House building; however this does not imply segregation in the use of the space. The allocated seating areas towards the northern edge are normally places to meet and relax and are highly used mainly due to being at the higher topographical point as well as being closer to the water features. The southern seating area is the quietest side and also the least used. The movement towards the southern side is the second least (after the central part) and considered to be the place where people have the least integration with the Old Market Square.

The second phase of the study analysed pedestrian movement and spatial inter-relations while the temporary Christmas market stalls are positioned towards the northern edge of the Council House. This node – being the busiest node - emphasises on the '*sense of arrival*' as well as garners the experiences of '*excitement*' and '*anticipation*' (White, 1999; in Carmona and Tiesdell, 2007, p.185). The physicality of the temporary structures being in a middle of a busy and linear path creates a linear pedestrian movement with the least interaction between the temporary structures and the adjacent buildings. Such positioning and movement would also have the least socio-environmental impact on human behaviour as well as minimize the potential of the space. This intensified linearity converts the space to act as a transient route rather than as an important path or node.



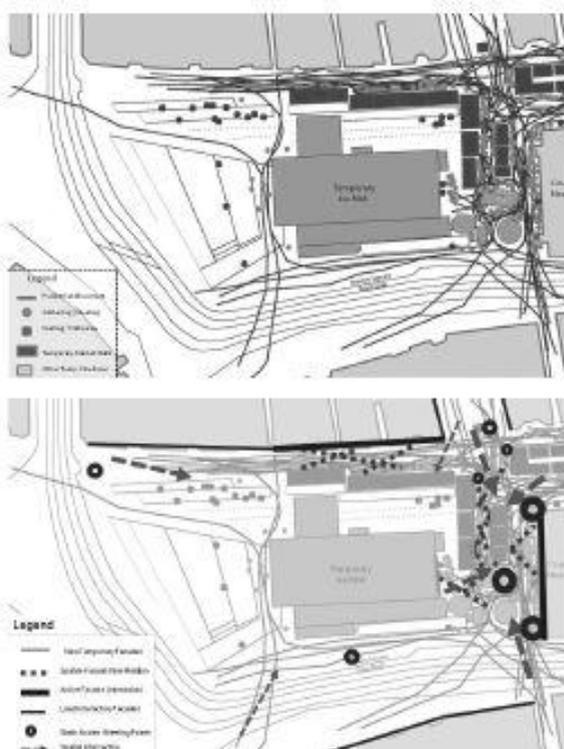
Figures 2 & 3: The behavioural analysis of the Old Market Square, Nottingham  
(Source: Cheshmehzangi, November 2010)



Figures 4 & 5: Linear movement pattern along the Northern Edge of Council House, Nottingham  
(Source: Cheshmehzangi, December 2010)

A very similar layout has also been seen on the other linear settings, such as the Christmas Market in Birmingham, where similar impacts were observed. As a result, the balance between the stationary activities and the movement is not achieved; therefore the possibilities of enhancing the identity of place are minimized.

As part of the second phase of the study, a different layout for the temporary markets is evaluated. This survey consists of the analysis of the temporary market stalls being positioned with the open parts of the Old Market Square. Such temporary layout, being partly based on the pattern of pedestrian movement, emphasises on creating what Oldenburg (1999; in Carmona and Tiesdell, 2007, pp. 163-9) calls 'third places'. This particular pattern creates a celebrating environment, where the balance between static and dynamic activities is balanced and spatial inter-relations are not forced but invited. Having this particular effect taking place does not only revive the identity of a place but also promotes a new identity in order to maximise the regeneration impact for a bigger context.



Figures 6 and 7: The behavioural pattern in relation to the market stalls of the Old Market Square, Nottingham  
(Source: Cheshmehzangi, December 2010)

A very similar layout for the German Market in Millennium square, Leeds, also demonstrates an organic setting for the temporary structures to influence the behaviours based on the existing pedestrian pattern. This idea of designing intimate places in an urban space, which refers to the importance of the spatial inter-relations, would also reflect on the concepts of '*silence of design*' (Neil, 2004) and '*Phenomenology of Spirit*' (Ferguson, 2009, p. 29) to construct the meaning of a place.

#### **4.0 Results and Discussions: Findings and Possibilities**

Amongst all temporary activities and programmes taking place in Nottingham's Old Market Square, temporary markets promote place-identity in the most dominant manner. This analytical research study on human behaviours and temporary markets made it possible to ascertain the importance of temporary events on people and therefore on the identity of the place. It is also argued that the term 'environmental meaning' is an essential human need to gain a '*sense of belonging*', which in fact significantly influences '*human psychological development*' (Walmsley, 1988, p. 8) as well as human behaviours.

The pattern of movement and how people behave in an environment is a reflection of the objectivity of the environment. It is less likely, therefore, that transformed space could use its maximised potential if a range of choices within the spatial organisation is not provided. As for the Old Market Square, the Christmas Market appears to create a sense of belonging when the static and dynamic patterns are balanced; however, this was not the case with the linear pattern that offered the least spatial interaction.

By referring to other similar cases such as the temporary markets taking place in front of the Town Hall in Vienna or the Christmas Market in Brussels, the concept of creating inner-spaces in between the market stalls is considered to be the best solution for such programmes. The stimulating movement created within the inner-spaces of the temporary structures would reduce the linearity effect of the space and generate more integration between both the programme and the space, and the space and its people. This would also endorse that human behaviour is influenced by the identity of a place, not only based on what the space represents but also based on its changing image (Lash et al., 1995). The temporary market layout for the Old Market Square in Nottingham has the potential to create added outdoor activities and further spatial inter-relations with its context.

#### **5.0 Conclusions and Suggestions**

If an urban environment is to be considered as a spatial '*system*' and it is to be valued as a whole, '*one must consider its parts in relation to its parts, its parts in relation to the whole and the whole in relation to the parts*' (Archer et al., 1984, p. 8). We could therefore postulate the fact that every element has a potential to play a role in an environment. It could also be argued that the wholeness of an environment could relate to the

environment's identity; considering the possible influences on spatial inter-relations. It is therefore a vital matter that a human seeks his relationship with his space. As Relph (1976, p. 147) states: '*A deep human need exists for associations with significant places. If we choose to ignore that need, and allow the forces of placelessness to continue unchallenged, then the future can only hold an environment in which places simply do not matter. If, on the other hand, we choose to respond to that need and transcend placelessness, then the potential exists for the development of an environment in which places are for man, reflecting and enhancing the variety of human experience*'.

The research findings for this study support the fact that what occurs in an urban space – both being behavioural and physical – could have an impact on the spatial inter-relationships within that space. This could also be inferred to the concept of transforming a space to an identifiable place, where a network of experiences, memories and perceptions are constructed. One person's outlook and experience is certainly different to another's; but the important factor in design terms, is how these transformations can influence the generalised '*behaviour imposed back to human by non-human delegates*' (Brand, 2005, p. 10). The analysis of Nottingham's Old Market Square has articulated the fact that temporary physical interventions are major socio-environmental devices that endorse identities and behavioural patterns. As for designers, this could indicate the necessity of adopting comprehensive human values within a collective urban framework.

Finally, human experience and behaviour is developed through a network of memories and identities attached to the environment, which Hayden (1997, p. 9) refers to be '*intimately tied*' to each other. The idea of identity construction can therefore be achieved through understanding the socio-environmental values of any society as well as the relationship of human and environment. The identity could then create a sense of place or a sense of belonging, not just through certain physical qualities, but through engineered subjective mechanisms. The temporary activities - as the socio-environmental norms (inspired from Fearon, 1999, p. 30) could become celebrating elements of any environment to boost spatial inter-relations and revive urban identities.

## **Acknowledgments**

This research study is funded by the 'Urban Design Research Group' at the University of Nottingham (Department of Architecture and Built Environment, Faculty of Engineering). The conference attendance was financially funded by both the 'Urban Design Research Group' and the 'Graduate School' at the University of Nottingham.

I would like to thank my students from the ARM module (Architectural Research Methods – Globalisation and Urban Sustainability Workshop) of autumn 2010; who have contributed directly and indirectly to this study.

## References

- Archer, S. E., Kelly, C. D. & Bisch, S. A. (1984), *Implementing Change in Communities: A Collaborative Process*. St Louis: The C.V. Mosby Company.
- Babbie, E. (1992). *The Practice of Social Research* (6th Edition), California: Wadsworth
- Brand, R. (2005). *Synchronising Science and Technology with Human Behaviour*. London: Earthscan.
- Brown, L. (2009). *Observational Field Research*. Ithaca: Cornell University (PDF Document).
- Carmona, M. & Tiesdell, S. (2007) *Urban Design Reader*. Oxford: Architectural Press (Elsevier).
- Fearon, J. D. (1999). *What is Identity – as We Now Use the Word?*. Stanford: Stanford University (PDF Document)
- Ferguson, H. (2009). *Self Identity and Everyday Life*. Oxon: Routledge.
- Hayden, D. (1997). *The Power of Place: Urban Landscapes as Public History*. Cambridge, MA: MIT Press.
- Hogg, M. A., & Abrams, D. (1988). *Social Identifications: A Social Psychology of Intergroup Relations and Group Processes*. London: Routledge.
- Jenkins, R. (1996). *Social Identity*. London: Routledge.
- Kaplan, S. (1973). *Cognitive Map in Perception and Thought*, in Downs, R. M. and Stea, D. (eds) *Image and Environment*. Chicago: Aldine, pp. 63-78.
- Kaplan, S. (1976). *Adaptation, Structure and Knowledge*, in Moore, G. T. & Golledge, R. G. (eds) *Environmental Knowing*, Stroudsburg: Hutchinson and Ross, pp. 32-45.
- Lash, S. M., Featherstone, M. & Robertson, R. (1995). *Global Modernities*. London: Sage Publications Ltd.
- Neill, W. J. V. (2004). *Urban Planning and Cultural Identity*. London: Routledge
- Oldenburg, R. (1999). *The Character of Third Places* (2nd edition). New York: Marlowe &

Company.

Pointer, G. (2005). *The UK's Major Urban Areas*, Chapter 3: People and Migration (PDF Document).

Relph, E. (1976). *Place and Placelessness*. London: Pion Limited.

Taylor, C. (1989). *The Sources of the Self: The Making of the Modern Identity*. Cambridge, MA: Harvard University Press.

Walmsley, D. J. (1988). *Urban Living: The Individual in the City*. Harlow: Longman Scientific and Technical

Wendt, A. (1994). *Collective Identity Formation and the International State*. *American Political Science Review*, 88. 384-96.

White, E. (1999). *Path-Portal-Place* (in *Appreciating Public Space in Urban Environments*). Tallahassee: Architectural Media Ltd.