

MODEL ANALYSIS PRINCIPLES FOR THE DESIGN OF PUBLIC SPACES IN THE BISTRIȚA-TÂRGU MUREȘ URBAN AXIS

Alexandru Marius TĂȚAR¹ 

ABSTRACT. *Model Analysis Principles for the Design of Public Spaces in the Bistrița-Târgu Mureș Urban Axis.* The physical urban terrain across cities continually evolves through insights, consultations, deliberate redesigning or random acts by community members and natural forces that reshape the urban landscapes and how urban spaces are used. This research establishes a set of normative principles that planners and others can use when planning and regulating the design and management of public space. Data were collected in the period March 2023 – January 2024. Based on a comprehensive analysis of public space in the city, the paper sets out a number of general principles relating to the essential, but often missing, strategic planning framework for developing and regenerating public spaces, providing seven more detailed considerations for assessing the quality of public space design and a proposal for spatial planning. This is an unreservedly positive framework for shaping public space, based on the idea that public spaces in our cities come in many different shapes and forms, but that together they add immense value to the experience and potential of urban areas. The research takes place in the Bistrița-Târgu Mureș urban axis, the field research carried out as part of the study results in a set of three principles of urban spatial planning that examine proposals for the design of public spaces.

Keywords: *public space, design principles, planning, Bistrița-Târgu Mureș urban axis*

1. Introduction

Public spaces range in form from informal street corners to grand civic set pieces. At a larger scale, formal public spaces have long had an important role as the perceived centres of settlements of all types and as the focus for public life, activities, and events. At a smaller scale, they might be somewhere

¹ *Babeș-Bolyai University Cluj-Napoca, Faculty of Geography, Doctoral School of Geography, e-mail: alexandrumarius232@gmail.com*



to rest, hang out, or play whilst providing a visual pause in the flow of streets through urban areas. They encompass everything from traditional squares to incidental urban spaces, to a range of new sorts of spaces (e.g., Cho et al., 2016) that challenge our perceptions – physically, socially and in terms of their management – about what public spaces should be.

What is clear is that since the 1980s, public spaces of all forms have witnessed a renaissance in that they have increasingly become a key component of many regeneration and development schemes (both residential and commercial), worldwide, with far-reaching impacts on how the resulting places are perceived and used (Crowhurst Lennard and Lennard, 1995; Corbett, 2004). In such a context, it is vitally important to design public spaces well, although experience suggests that often our ambition is not met by reality. When we get them right, however, high-quality public spaces offer huge economic, social, and environmental benefits to their localities and communities (CABE, 2004).

This paper draws on research conducted in the city (Carmona and Wunderlich, 2012) to propose a set of rules, first, relating to the critical planning considerations for the development and regeneration of public spaces, and second, concerning the more detailed considerations for evaluating the quality of public space design. In doing so, it builds on, organises, and better articulates a set of new normative principles for public space that stemmed from the research underpinning this paper and that were originally offered as a provisional attempt to re-theorise public space discourse based on the actual experiences of public space creation, use and management, rather than based on its critique (Carmona, 2015).

2. Materials and methods

The working methodology was divided into: Basic Research and Applied Research.

2.1. Basic Research

Also known as pure or fundamental research, basic research refers to research designed and oriented towards exploring and explaining the basic principles behind the ordinary functioning of the world. The OECD (2002) defines basic research in the Frascati Manual as experimental or theoretical work undertaken purely to acquire new knowledge of observable land.

Pure research in urban planning, therefore, entails the engagement, often by the philosopher kings (those of high intellectual calibre) of the discipline, into examining existing theories explaining certain phenomena, redesigning these

theories, or, where they are found plausible, coming up with alternative theories to offer better explanations. Similarly, the researchers can examine completely new phenomena and propose new theories in areas that had not been explored before. Such would include the current drive to have green urban infrastructure to combat global warming, or studies to develop theories on smart cities (Palys, 2018).

Pure research largely involves observation, polls/surveys, interviews and focus group discussions as its primary means of investigation. Secondary research methods used here include online searches, literature searches and case studies (Palys, 2018; Parnell & Pieterse, 2015).

2.2. Applied Research

Unlike pure research, Palys (2018) as well as Baimyrzaeva (2018) state that applied research is practical and is aimed at offering immediate solutions to an existing problem. It bases its studies on pre-existing theories and assumptions made while undertaking pure research (pre-existing knowledge) to address real-world problems. It is hence problem-solving in nature (OECD, 2002).

Summarize the applied research process as shown in Figure 1 below:

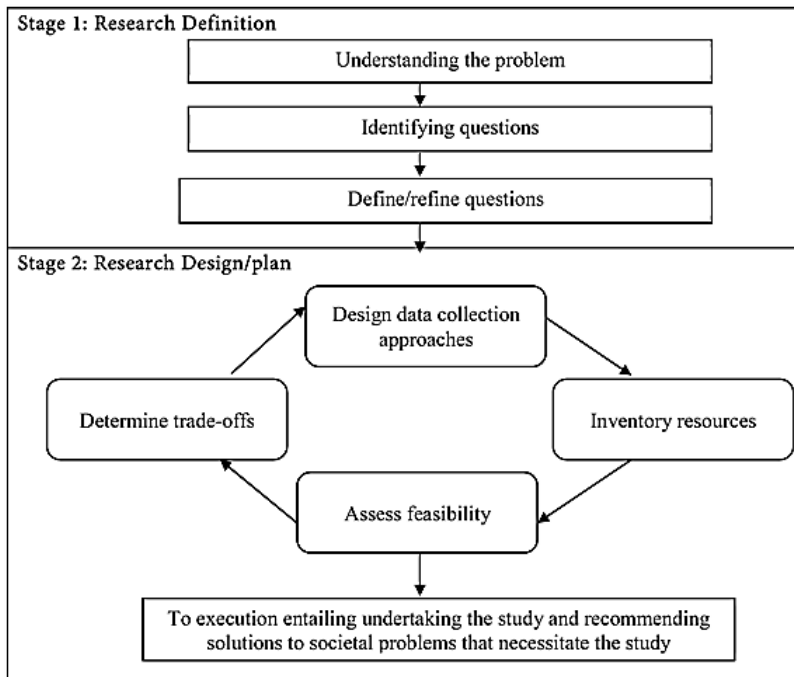


Fig. 1. The applied research process as outlined by Bickman & Rog (2008)

3. Results and discussions

3.1. Planning for Public Spaces

The issue of delivering better public spaces is seen here first through the prism of planning because planners have a critical role to play in the creation and shaping of public spaces; a role that manifests itself in two distinct ways. First, planners are often the initiators of public space projects, for example, recognising the need and potential for new or regenerated public spaces in particular locations through the auspices of the proactive site or area-based plans, frameworks, and briefs, or otherwise encouraging them in policy.

Second, planners are the guardians of how public spaces come into being through the regulatory processes of development management (granting or denying permission to develop). Both are critical roles in ensuring that public spaces fully serve the public interest as much as heralded success stories such as the Barcelona show (Monclus, 2003), arguably it is important to get the strategic decision-making framework for public space right before worrying about the detailed execution.

This is all the more important given that, globally, more often than not it is the private sector that is designing and delivering new public spaces, and which is ultimately also often responsible for their ongoing stewardship.

In such a context, planning is the gateway through which the public interest, as regards the design and management of public space, is tested, and if the opportunity is not taken to safeguard key qualities and interests, it is unlikely to quickly come again.

At this scale, the city research suggested that three key factors should be considered:

- What are the processes through which public spaces evolve, and how do planning and other forms of regulation interact with them?
- What types of public spaces should be provided, and where?
- How should rights and responsibilities for public spaces be safeguarded over the long term?

These are 'process'-related considerations and reinforce the argument made elsewhere (Carmona, 2014) that it is vital to understand and get the process of design right before focusing on desired outcomes.

3.2. Evolving public space (whether formal or informal)

Public spaces require something in their physical form that allows us to distinguish them from their surroundings as a clear and identifiable place. Typically, this is a sense of enclosure, where the buildings and landscape, to

greater or lesser degrees, first open up to create a space, and second, wrap around and 'contain' space to hold the eye and create a distinct place. Whilst the factors determining a sense of enclosure are contested many formal public squares are of this type and planners will need to work closely with developers and other interested parties to ensure they exhibit the sorts of qualities discussed in the second half of this paper.

A strong sense of enclosure is not, however, a prerequisite for a successful public space as increasingly very successful informal local spaces have been created by simply reclaiming small parcels of street parking or roadway from vehicles, or by paving over the end of a street to create a pause in the urban fabric and an informal space for pedestrians.

Other spaces have been given new character and purpose by the granting of temporary use rights, perhaps for a market, or have even been created as spaces on a temporary or occasional basis through actions as simple as painting markings on a road or repurposing a car park. In this regard, not everywhere needs to be finished and refined, but can also be transient, even rudimentary, in places of regeneration or rapid change. At the other end of the scale, recent years have also seen the character of many of the city's historic squares changing, most notably Trafalgar Square, as a result of traffic calming and significant public realm improvements.

All these sorts of processes will involve distinct planning inputs although they may be initiated outside of the formal planning processes, and most notably from within the highways/street management function of municipalities. In all cases, planners will need to be flexible enough to understand and embrace the evolving nature of public space, and mindful of the important role of the range of public sector agencies that impact the shaping of public spaces. In Bistrița for example, four forms of regulation have been critical when creating or re-shaping public spaces:

- Planning controls to sanction new public space proposals or where changes of use or alterations to the (non-highways related) built fabric occur in existing spaces;
- Highways orders, focusing on changes to highways themselves (including 'stopping up' existing rights of way);
- Street trading licencing if proposals involve uses concerned with selling goods or services in public space.

Planning therefore also has a vital coordinating function across the various actors to ensure that policies and approaches are in harmony and outcomes, including innovations in practice, are optimised.

Creating a place entails a broader view that goes beyond design; a successful public space possesses four key attributes: accessibility, activities, comfort, and sociability. These attributes depend on effective management and require the involvement of many different disciplines and interests.

3.3. Design of public space in the Bistrița-Târgu Mureș urban axis

The research remarked two stages of public space planning. The first phase is given by the way/architecture of the execution. It is the phase in which the organization and work in space are noted. In the second phase, the finality/aesthetic aspect is noticed in the functionality, condition, and aesthetics of the work.

A. Bistrița

- The first phase of architectural works



Fig. 2. Bike path development (own source)



Fig. 3. Pedestrian alley landscaping, decking, and cladding; Street improvement, decking and cladding (own source)



Fig. 4. Aesthetics way of working (own source)



Fig. 5. Street improvement, decking and cladding (own source)

MODEL ANALYSIS PRINCIPLES FOR THE DESIGN OF PUBLIC SPACES
IN THE BISTRIȚA-TÂRGU MUREȘ URBAN AXIS



Fig. 6. Type of kerbing used (own source)



Fig. 7. Framework layout urban development works (own work)

B. Târgu Mureș



Fig. 8. Road resurfacing works (own source)



Fig. 9. Excavation operations (own source)



Fig. 10. Street improvement, decking and cladding (own source)



Fig. 11. Road network in work without asphalt pavement

It should be noted that due to the major public works under consideration, Târgu Mureş does not enter the second phase, the finality/aesthetic aspect of the work. Therefore, there is a difference in the urban axis.

➤ The second phase, the finality/aesthetic aspect of work

A successful public space generally needs to offer four qualities: it should be accessible, it should be comfortable and have a good image, people should be able to engage in an array of activities, and it should be sociable.

C. Bistrița



Fig. 12. Final layout of the street works, bike path



Fig. 13. Design of the final layout pedestrian walkway, bicycle path

3.4. Diverse public space (avoiding one-size-fits-all)

The principle of cities, and by extension public spaces, for all has been fundamental to many discussions about the city at least as far back as Henri Lefebvre's call for a right to the city (Lefebvre, 1968).

But if one accepts that the city is for all and certain unalienable rights need to be guaranteed for everyone, then it also follows that the city will be one of diversity and difference, and not everyone will seek the same or even compatible things.

Consequently, not every public space will, or should, cater equally to every citizen or for every occasion, despite calls in some quarters that anything less is in effect exclusion (e.g., Malone, 2002).

The city research confirmed that public spaces take on different flavours as a result of the different groups of interests that create them and the particular range of uses they accommodate. It follows that just like rooms in a

house or buildings in a city, it would be not very smart to try and design all public spaces according to some idealised cloned blueprint so that each is equally appealing to all. Some spaces are vibrant and commercial, others focused on play (for children and/or adults), and others are serious and civic, or peaceful and relaxing.

This diversity recognises the diversity of lifestyles, preferences and needs amongst urban populations and that through the design of their public realm, there is the opportunity for urban areas to offer something for everyone in the right locations although not necessarily everything for all everywhere. Planners need to recognise this legitimate diversity, particularly in large cities, and avoid imposing one-size-fits-all aspirations on public space projects that play into critiques around the homogenisation of public space (e.g., Light and Smith, 1998; Sennett, 1990). In this respect, the public spaces of a town or city can be planned in a strategic sense just as the buildings are, with care taken to ensure that all sections of the community are catered for and that spaces are provided in locations that are safe, convenient, and inviting to use and that avoid conflict, for example, between skateboarders and commercial interests or between revellers and residents.

But whilst strategic planning for green spaces has long been on the agenda and is widespread (e.g., CABE, 2004), the notion of planning in a more systematic fashion for public spaces more generally has not been widespread and only a minority of cities such as Copenhagen and Melbourne can claim to do so. If the city experience is indicative of the situation elsewhere, then at the heart of such efforts should be planning for a diversity of provision and not just for a greater quantum of public space, and certainly not for an over-simplified and potentially homogenised vision of one-size-fits-all.

3.5. Free public space (securing rights and responsibilities)

The discussions about our rights to the city often focus on who owns and manages space, with the most polemical discourses denouncing processes of privatisation as the death of public space (e.g., Mitchell, 1995).

Empirical research, by contrast, has tended to show that ultimately the rights and responsibilities associated with spaces and what this implies about how public they are more important than who owns and manages them (Carmona et al., 2008).

Public spaces are owned and managed through multiple complex arrangements and always have been, and many are neither public nor private as regards who owns and manages them.

Moreover, restrictions on use apply to all spaces, regardless of ownership, not least as a means to ensure that their amenity value is distributed fairly across the range of potential users (Nemeth, 2012). Yet underpinning the notion of

‘public’ space in much of the literature is the idea that, as far as possible, space should be ‘free’, in three senses of the word: open, unrestricted, and gratis. Arguably, whatever the ownership, such guaranteed freedoms of use are best established by clearly setting out guaranteed rights and responsibilities for users and owners alike at the time that spaces are created or regenerated.

- 
- All public space users have the right to:**
- roam freely
 - rest and relax unmolested
 - associate with others
 - use public space without the imposition of petty local controls unless carefully justified e.g. on drinking, smoking, safe cycling, skating, and dog walking,
 - collect for registered charities
 - take photographs
 - trade (if granted a public licence)
 - demonstrate peacefully and campaign politically
 - busk or otherwise perform (in non residential locations).
- Public space users have a responsibility to:**
- respect the rights of others to conduct their business unhindered and unmolested
 - respect public and private property
 - act in a civil and safe manner at all times
 - avoid littering
 - keep the peace.
- Owners and managers of public space have a responsibility to:**
- respect and protect the rights of all users, including to privacy
 - treat all users in an equitable and inclusive manner
 - keep spaces safe within the context of the actions of any reasonable person
 - keep spaces clean and well maintained
 - keep spaces open and unrestricted at all times (or otherwise in line with regulatory stipulations).

Fig. 14. Model: An indicative charter for public space rights and responsibilities
Source: Realised by the author

This does not always happen, and particular problems occur when owners and managers seek to use the privilege of ownership to exclude key groups (such as teenagers), restrict access (for example, at night) or impose codes of behaviour that go beyond societal norms such as banning photography. Whilst, in common with many cities, these sorts of behaviours are not widespread in the city when they occur, they undermine the freedoms that public space users rightfully expect. For planners, it is therefore vital to negotiate these long-term management issues at the same time as more immediate quality concerns

are considered. If rights and responsibilities are not tied down at the time that regulatory permissions are given, it will be much harder to revisit them later. Municipalities, for example, might consider adopting a Charter for Public Space Rights and Responsibilities in policy or ordinance as a standard set of expectations that would relate to all public space proposals (Fig. 9).

3.6. Designing public spaces, delineated public space (clearly public in their use) and engaging public space (designing in active uses)

Beyond strategic considerations relating to how public spaces evolve and are regulated, the balance of space types across an urban area, and how to guarantee rights and responsibilities; at a more detailed level, planners are also often the guardians of how new public spaces are created and existing spaces are regenerated. Thus, through their plans, ordinances, frameworks, and policies, or discretionary negotiations on development proposals during the regulatory process, planners have the opportunity to set out and implement clear principles for the sorts of public spaces they would wish to see. Whilst every public space will be different and attempts to define universally applicable principles for 'good' public space design are often based on little more than supposition and intuitive analysis, extensive empirical testing revealed several critical factors that are likely to be important in the design of most public spaces (Carmona and Wunderlich, 2012).

The remainder of this paper takes these seven factors in turn and, drawing from the research suggests in a little more detail why they are important and, concerning each, which aspects planners might consider.

The problems associated with creating spaces that are neither public nor private in their use have been well documented in the urban design literature, at least since the writings of Oscar Newman (1973). This has long been a problem in residential areas but is also apparent in some commercial developments, whilst some retail schemes can appear overly exclusive and therefore not fully public, or at least not welcoming to all.

There remains an important need to carefully delineate the public and private realms of the city, recognising that public spaces in the wrong places can be more problematic than the absence of public space altogether. Instead, public spaces (including all varieties of pseudo-public space) should be designed to appear welcoming, inviting and visually and physically accessible, avoiding any doubt in users' minds that they are public, regardless of who owns and manages them. Equally, private spaces for relaxation such as private or communal gardens have an important and quite distinct role that is separate from the

shared public parts of the city. Through the way they are designed, these parts of the city should be private, even if visible from the public realm.

This is not segregation in the negative sense that it is sometimes viewed in the literature (e.g., Webster, 2001), but merely a positive division between the public and private functions of the city; the careful demarcation between which represents a fundamental quality of good urbanism (Carmona et al., 2010).

Whilst buildings, landscape and infrastructure define the physical limits of external public spaces, the land uses surrounding spaces, and those lining the streets leading from spaces will dictate what sort of places they will be; whether peaceful, gently animated, or full of life.

At all times it is important to be realistic about what will work and what will not in particular locations, and therefore about what sort of space can or cannot be created trying to create a vibrant commercial hub in a quiet residential area or a peaceful oasis in a busy urban centre is likely to be unrealistic.

Despite criticisms that public spaces have become over-commercialised and unduly dominated by the pressure to consume (e.g., Hajer and Reijndorp, 2001), much of the buzz associated with particularly active spaces will tend to be wrapped up in the activities of consumption of one sort or another – shops, cafes, bars, markets, etc. – and typically these processes animate and enrich public spaces and are welcomed by users.

If the intention is to create such a space, then active uses should be carefully designed into the public space from the start, helping to fill them with life and allowing users to engage with them. The importance of getting the use mix surrounding (and within) public spaces right is therefore an early and critical lesson in the public space design process and involves decisions in which planners almost always play a leading role.

3.7. Meaningful public space (incorporating notable amenities and features), social public space (encouraging social engagement) and balanced public space (between traffic and pedestrians)

Extensive interviews with users of spaces across London suggested that they are primarily concerned with how they experience space – good or bad, engaging or repellent, attractive or ugly – rather than with narrow stylistic concerns associated with the details of their design or whether they are narrowly ‘authentic’ or not; a concern of some of the literature on public spaces (e.g., New Economics Foundation, 2004). Over time, spaces become more meaningful as users interact with them and they acquire the patina of age and use. Spaces can also become more meaningful by incorporating key historic or landscape features (e.g., existing historic buildings or mature trees), and by hosting other amenities and features with which users can directly engage. These

might be active, such as big screens, band stands, kiosks, sports facilities, fountains, paddling pools, play equipment, skating opportunities, stages, amphitheatres, lighting displays and so forth. Equally, they may be restful, serious, or contemplative, such as public art, sculptural furniture, memorials and monuments, reflection pools, flower gardens/displays, Wi-Fi hot spots, and so on.

How we design public spaces can make them more or less conducive to social interactions of all types, from large-scale events and festivities to low-key humble encounters, and everything in between. Rather than a retreat from public space as predicted by some (e.g., Graham and Marvin 2001), the evidence from London suggested that, if conducive to such uses, public spaces still represent the definitive venues for public debate, protest, encounter, collective experience, communication and the rich and varied social life of towns and cities. Detailed observational work revealed that movement in public space predominantly flows along dominant movement corridors or 'desire lines' passing right through spaces, and from movement corridors to the active uses of space and vice versa. In the majority of spaces that are well integrated into the movement network, only a small proportion of users will stop within and engage directly with the space itself whilst the majority will pass straight through.

Nevertheless, high levels of through movement will generally stimulate high levels of activity in the space, with the highest density of such activities (and social encounters) typically occurring in the gaps between the dominant lines of movement and being drawn to and around key amenities and features.

Individual spaces (if large enough) can also work successfully as a series of distinct and separate subspaces, each with a different character and purpose and designed to attract different sorts of users (e.g., fountains for children, steps and ramps for skateboarders, nooks for quiet conversation, and so forth). In designing public space, it is important to consider the desired social outcomes and how the physical space and its context will or will not support them. Whilst particular social outcomes can never be guaranteed (Carmona et al., 2010), leaving such outcomes entirely to chance is unlikely to be a successful strategy.

The challenge of traffic dominance is a perennial problem that continues to blight many public spaces with severe knock-on impacts on their social life (Gehl and Gemzoe, 2000). The solution, however, does not have to be banning all traffic. Instead, a subtle re-balancing of space is often all that is required as traffic and pedestrians can harmoniously share public space with mutual benefits to both groups: allowing drivers direct access to and between important urban centres; and providing a background level of animation and surveillance in public spaces. This requires that enough space is given to pedestrians for movement and socialisation; that they are not corralled and kettled, but trusted to move and navigate freely; and, to enable this, that traffic is slowed sufficiently on roads leading into and through public spaces (Fig. 10).

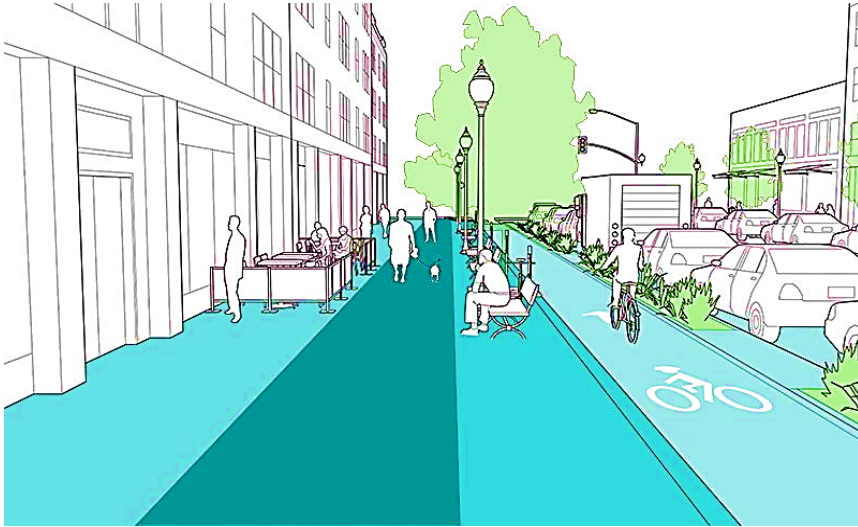


Fig. 15. Model: Balanced public space between traffic and pedestrians
Source: Realised by the author using the SketchUp program

3.8. Comfortable public space (feeling safe and relaxing) and robust public space (adaptable and distinct in the face of change)

Despite claims in the literature that there has been a general securitisation of public space (e.g., Minton, 2009, p. 240), in reality, security is expensive, and arrangements tend to be pragmatically defined to reflect the needs of different types of public spaces. Whilst some very busy spaces (e.g., the forecourts of major railway stations) may need and do possess highly visible security, most do not. Ultimately, the objective should be the wellbeing and sense of wellbeing of users, and their ability to use spaces in a relaxed and comfortable manner.

Interviews with the users of public spaces in the city confirmed the long-held view from Jane Jacobs (1961) that security (or at least a sense of security) is first and foremost determined by how busy spaces are, as active spaces will always seem safer than deserted ones, as good spaces that are well overlooked and visible from the outside. Second, how well spaces are managed also has an impact, with spaces that are clean and tidy and well maintained generally feeling safer than those that are not. Finally, spaces should be relaxing, with opportunities to stop and linger, for example, with good quality, comfortable and preferably moveable formal seating, informal seating opportunities (on steps, kerbs, and walls), toilet facilities, soft landscaping and careful consideration given to microclimate (places to sit in the sun, and to shelter from the wind and the rain).

Grass, for example, whilst requiring active maintenance, is very popular because it is comfortable, and flexible and allows users to position themselves to take advantage of micro-climatic conditions. It is also highly conducive to relaxation, play and social engagement.

Finally, the success of public spaces will depend on shaping places which, through their robust design (simple, uncluttered and with resilient natural materials, trees, and planting), and background level of activity, can adapt and change over time in a manner that can withstand the sorts of homogenisation pressures that are so derided in the literature (e.g., Boyer, 1993) and which still feel distinct, welcoming, and rooted in the local context. In the short term, this means spaces that can adapt to different uses and activities, perhaps at different times of the day (somewhere for workers to lunch or for children to play throughout the week, a market on a Monday and, without feeling deserted, quiet on a Sunday), or across the year (concerts in summer and ice skating in winter).

In the long term, it will mean successfully adapting to changes in the uses that surround the space or to the demands placed on spaces by changes (yet unknown) to society and technology. It will also mean design solutions that reflect the realities of management routines and the budgets available for the upkeep of public space, with materials and features that can age gracefully and in a timeless manner.

3.9. Proposals for the design of public spaces

The field research results in a set of three principles of urban spatial planning that may change the social character of citizens:

- A. **Keep it simple:** In the first stages of your project, maintain a simple and adaptable design that will allow for future enhancement of the space as funds become available and the community more involved. A good design should be able to adapt to change. While buildings come and go, the streets and the public spaces last for a longer time. New developments and public realm improvements should be designed both to respect the existing context and to accommodate future changes;
- B. **Make it accessible for everyone:** A good public space provides ease, safety, and choice to people when moving to and through places. Helping people to find their way around and understand how a place works is often overlooked but it is one of the most important factors in design. Create paths and wayfinding signage to improve accessibility, orientation, and connectivity of spaces and functions. A clear hierarchy of streets and paths should be established to enable pedestrians, cyclists, and people with physical disabilities to move around the city safely and quickly;

- C. **Plan for people, not for cars:** The streets are the interface between the public and the private realm. A street should be designed to accommodate all sorts of functions, not dominated by one, as in our modern society by the car. If you plan cities for cars and traffic, you get cars and traffic. But if you try to incorporate the local car movement in streets with priority to pedestrians and cyclists, you can get amazing results in terms of quality and safety. By leaving your car at the limit of the residence area, and walking 100 or 150 meters to your house, crossing the neighbourhood, you have more space for other creative open-air activities and a more human-centred public space.

4. Conclusions

Normative frameworks for urban design have often been much criticised for the tendency that they encourage us to focus on a narrow view of defined physical outcomes in the absence of a proper understanding of their socio-political context (Sorkin, 2009; Biddulph, 2012; Arabindoo, 2014). Whilst this must be a dangerous and uncritical application of any design prescriptions in policy or projects that should be avoided, we should not be so weary that we are prevented from articulating the results of well-grounded research and analysis in normative terms as this paper has attempted to do.

Arguably, the issue is not normative prescription per se, but the caution (or absence of caution) with which prescriptions are applied. So, beginning with this heavy caveat and with the proviso that all the research underpinning the normative principles described in this paper was derived from analysis of the city (as the illustrations throughout have reinforced), it is postulated that the ideas presented provide a straight-forward and widely applicable framework against which planners and other regulators can assess their engagement with issues of public space design and management.

As the recent UN Habitat (2013) report on streets and public spaces as drivers of prosperity reminds us, these are universal concerns of equal or perhaps even greater significance to the cities of the globe. Such issues are too important to be left to chance or ad hoc case-by-case negotiation on individual projects and propositions. Instead, as has been argued, in advance of development there is huge value in setting out a series of well-grounded positive principles for public space design, set within a coherent strategic framework for the long-term planning and management of public spaces. This paper has attempted to show this at the urban axis level.

REFERENCES

1. Arabindoo, P., (2014), *Urban Design in the Realm of Urban Studies*, Explorations in Urban Design, ed. M. Carmona, Ashgate, London.
2. Baimyrzaeva, M., (2018), *Beginners' Guide for Applied Research Process: What Is It, and Why and How to Do It?*, University of Central Asia, 10-26.
3. Biddulph, M., (2012), *The Problem with Thinking About or for Urban Design*, Journal of Urban Design, 17 (1), 1-20.
4. Boyer, M., (1993), *The City of Illusion: New York's Public Places*, The Restless Urban Landscape, ed. P. Knox, Prentice Hall, New Jersey.
5. Carmona, M., (2014), *The Place-Shaping Continuum: A Theory of Urban Design Process*, Journal of Urban Design, 19 (1), 2-36.
6. Carmona, M., (2015), *Re-theorising Contemporary Public Space: A New Narrative and a New Normative*, Journal of Urbanism, 8 (4), 374-405.
7. Carmona, M., Magalhães, C.D., & Hammond, L. (eds.) (2008), *Public Space: The Management Dimension*, Routledge. [HTTPS://DOI.ORG/10.4324/9780203927229](https://doi.org/10.4324/9780203927229)
8. Carmona, M., Tiesdell, S., Heath, T., and Oc, T., (2010), *Public Places, Urban Spaces: The Dimensions of Urban Design*, 2nd ed., Routledge, London.
9. Carmona, M., & Wunderlich, F., (2012), *Capital Spaces, the Multiple Complex Public Spaces of a Global City*, Routledge, London.
10. Cho, Im Sik, Heng, C.K., Trivic, Z., (2016), *Reframing Urban Space, Urban Design for Emerging Hybrid and High-Density Conditions*, Routledge, Abingdon.
11. Commission for Architecture and the Built Environment (2004), *The Value of Public Space, How High-Quality Parks and Public Spaces Create Economic, Social and Environmental Value*, CABE Space, London.
12. Corbett, N., (2004), *Transforming Cities, Revival in the Square*, RIBA, London.
13. Crowhurst Lennard, S., & Lennard, H., (1995), *Livable Cities Observed*, Gondolier Press, Carmel, CA.
14. Gehl, J., & Gemzoe, L., (2000), *New City Spaces*, The Danish Architectural Press, Copenhagen.
15. Graham, S., & Marvin, S., (2001), *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition*, Routledge, Abingdon.
16. Hajer, M., & Reijndorp, A., (2001), *In Search of New Public Domain*, NAI Publishers, Rotterdam.
17. Jacobs, J., (1961), *The Death and Life of Great American Cities*, Random House, New York.
18. Lefebvre, H., (1968), *Le Droit à la Ville*, Anthropos, Paris.
19. Light, A., & Smith, J., (1998), *Philosophy and Geography II: The Production of Public Space*, Rowman and Littlefield, Lanham.
20. Malone, K., (2002), "Street Life: Youth" Culture and Competing Uses of Public Space, Environment and Urbanization, 14 (2), 157-168.

21. Minton, A., (2009), *Ground Control, Fear and Happiness in the Twenty-First Century City*, Penguin Books, London.
22. Mitchell, D., (1995), *The End of Public Space? People's Park, Definitions of the Public Democracy*, *Annals of the Association of American Geographers*, 85 (1), 108–133.
23. Monclus, F., (2003), *The Barcelona Model and an Original Formula? From 'Reconstruction' to Strategic Urban Projects (1979–2004)*, *Planning Perspectives*, 18 (4), 399–421.
24. Nemeth, J., (2012), *Controlling the Commons, How Public is Public Space?*, *Urban Affairs Review*, 48 (6), 811–835.
25. Newman, O., (1973), *Defensible Space: People and Design in the Violent City*, Architectural Press, London.
26. OECD (Organization for Economic Co-Operation and Development) (2002), *Proposed Standard Practice for Surveys on Research and Experimental Development* (p. 77), Organization for Economic Co-Operation and Development.
27. Palys, T., & Atchison, C., (2021), *Research Methods in the Social and Health Sciences*, Sage Publishing.
28. Parnell, S., & Pieterse, E., (2015), *Translational Global Praxis: Rethinking Methods and Modes of African Urban Research*, *International Journal of Urban and Regional Research*, 40, 236-246.
29. Sennett, R., (1990), *The Conscience of the Eye, the Design and Social Life of Cities*, Alfred Knopf, New York.
30. Sorkin, M., (2009), *The End(s) of Urban Design*, in: *Urban Design*, ed. A. Krieger and S. Saunders, University of Minnesota Press, Minneapolis.
31. UN-Habitat (2013), *Global Public Space Toolkit from Global Principles to Local Policies and Practice*, United Nations Human Settlements Programme, Nairobi.
32. Webster, C., (2001), *Gated Cities of Tomorrow*, *Town Planning Review*, 72 (2), 149–170.