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## GENERAL DESIGN GUIDELINES IN PUBLIC SPACES DESIGNING

### GENERALNE PRYNCYPIA PROJEKTOWANIA PRZESTRZENI PUBLICZNYCH

#### Abstract

In the 1960s, the concept of place was introduced into the architectural thinking. This concept paved the way for an identity of a new town and is shaped according to the cultural, space notions, human needs, climate and other factors. An architect could either interpose an area with a strong sense of place or diminish it through tactless intervention. This paper summarizes the general design guidelines and influencing factors in designing public spaces.

*Keywords: social cohesion, diversity*

#### Streszczenie

Pojęcie *miejsce* wprowadzono do świadomości architektów od lat 60. ubiegłego wieku. Utorowało to drogę do nadawania nowym miastom cech indywidualnych, wynikających z przesłanek kulturowych, wzorców przestrzennych, ludzkich potrzeb, klimatu i innych czynników. Stało się jasne, że architekt może albo wzmocnić poczucie miejsca albo je osłabić przez pozbawioną wrażliwości interwencję. Niniejszy artykuł zestawia najważniejsze zasady projektowe i czynniki, które powinny być punktem wyjścia dla projektowania przestrzeni publicznych.

*Słowa kluczowe: wytyczne projektowe i czynniki wpływające na projektowanie przestrzeni publicznych*

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Public Space is an area that is reachable and accessible to everyone at all times; and whose responsibility for upkeep is held collectively. There are a number of more, or less, private places or public areas depending on certain factors such as: the degree of accessibility, the form of supervision, the person using it, which takes care of it and their respective responsibilities. Typically, open spaces take up around 1/3 of urban areas.

There are three urban design theories that provide a useful basis for the examination of modern urban space and also the historic precedent as quoted by Trancik, 1986:

The figure ground theory highlights the 'unity of opposites' whereby the aim of the objects is to manipulate the relationships by adding to or subtracting form or changing the physical geometry of the pattern. It's the starting point in understanding the form of an urban place, studying the relationship between the open space and also the building mass. It's more of a two-dimensional abstraction in plan view that shows the structure and order of urban spaces and a great spotting tool for identifying textures and patterns of the urban fabric and the spatial order.

The linkage theory, on the other hand, is all about streets, pedestrian ways, linear open spaces and elements connected to each other. It emphasizes connection and movement, which gives spatial definition. The ideal street must form a completely enclosed unit to avoid the impression of being a thoroughfare and provide a better setting for architecture. This way, one's impression is confined within it; and increases the perfection of its tableau so one feels at ease in a space where the gaze cannot be in infinity. To have a properly functioning pedestrian street, vehicular traffic must be excluded and the building along the pedestrian should be planned in a way whereby there is nearly no indoor, staircases, corridors and lobbies; thus leaving most circulation outdoors. The width of the street should not exceed the height of the surrounding buildings to create a comfortable pedestrian street.

Finally, the place theory illustrates human needs, culture, historical value, nature contexts and social values in the urban open space.

First and foremost, we will look at the scope of overall planning. Gridon planning is still widely used by urban planners throughout the world to kick start an urban development. It's the principle of minimal ordering of the city where almost all the plots will turn out to be either square or rectangular in dimensions. These plots could be filled in a variety of ways, depending on the functions and the nature of the period in which it's required.

No doubt that, a series of square and rectangular plots will lead to dullness and the outcome is repressive. The problem exists but with great planning the negative values actually recedes into the background as the expansion of the building. Manhattan (New York) is a fine example for this situation. It proves that major factors affecting whether the Gridon system allows future expansion with variation or reducing them all lies in the proper balance of the planning stage.

Hence I would say The Gridon system has to stay; a blueprint for what has to be done next and the formation of the new development. All buildings planned in a city have to arise in unity; hence influencing how it is determined as a whole unit (Building order). The unity will be regarded as a structure or a guideline the direction of development.

Now, let's move on to the shapes and size criteria for public squares. Traditionally, there have been a lot of attempts in grouping the form of a square. Among all the theories, one of the most recognized theories was outlined by Sitte. According to Sitte there are 2 types of square, 'the deep type and the wide type' and whether the plaza is deep or wide it all depends on the position of the observers<sup>1</sup>. It's the way they view the place, the proportional relationship between the size of the public square and the surrounding buildings and also the relationship of the users to the surrounding building. All of the mentioned are tied in together and achieving all those would be the ideal spatial resolution. One of the prime examples where the ideal spatial resolution has been achieved is Venice.

Of the three dimensions of an open space, the vertical scale contributes more effectively in providing a sense of scale, as our human eyes will be able to distinguish a change in height more significantly compared to a change in the plan dimension. Hence, building design has to be of considerable proportion to each other and the width of either the public space or pedestrian street.

A change in height would not be appreciated in a tight enclosed space. It would come off as too dominant and intimidating.

People feel most comfortable in spaces which have a 'back and a view into a larger spaces, this would apply at all scales from the seating device in a garden to a town squares with a vista onto a larger space. A very important matter to take note is seating should not be lower than the surrounding levels as it reduces the potential prospect onto the social space. Seating could be chairs or benches or secondary features like steps, walls or planter. Seating provided must be ergonomically correct, comfortable and well contoured seats and back. There is a rule of thumb on placing 30cm of seating for each 3 square meters of open space is recommended. As activities fill the perimeter of a public space it becomes more lively and this promote opportunity for spontaneous activity at the edge of public spaces which would attract passerby or people to linger! According to empirical observation 15 square meters per person in a public square is considered lively however at 50 square meters per person, that same square can be regarded as dead.

Often, architects would do strict symmetry and geometric planning which should be avoided. We should first understand and analyze the nature of the site, working with it instead of introducing a strict geometrical symmetry. Looking from the past, most of the public spaces were not exactly specifically planned on a drawing board but instead they were developed gradually on nature and through time. Sienna in Italy has numerous examples of Public Square which are irregular in plan but creating a fine setting for churches and other important buildings.

Based on what D.K. Ching has said, symmetrical or asymmetrical arrangement of form and spaces would establish an axis of a certain spaces. There are two types of symmetry: Bilaterally symmetry is about achieving a balance between the arrangements of a two similar elements in a common axis. Whereas, radial symmetry is more about elements balanced out in two or more axis that intersect to a central point<sup>2</sup>.

Another important point to bear in mind is that the centre of public squares should be kept free from clutter. On a survey conducted by Sitte, there are only six of the churches in Rome out of the two hundred and fifty-five churches that appear to be free standing. Six of the churches can be viewed from an adequate distance on a piazza that is not too large and the integration with the space is resolved with a careful thought. There are more successful examples in Italy showing the placement of important buildings in a public square, where one of more sides of the buildings form part of the piazza's perimeter. Examples such as Piazza del Duomo, Vicenze, and more. They have successfully achieved a perspective whereby most of the building's façade could be viewed as the backdrop to a stage<sup>3</sup>.

As an architect, we should design a space as a neutral space so the building could be put in different uses in the future and they could therefore absorb and accommodate the influences of changing times and situation as we approach urbanism. This concept, in other words, is "flexibility" of space, which could then be defined as the absolute denial of a fixed, very distinct standpoint. Meaning that, there never will be a correct resolution that exists, it's always temporary which allow the future user, owner, and developer to have the flexibility to alter the function of the space without wasting much cost of refurbishments.

Building design should also illustrate a lack of identity and distinctive features without neglecting the characteristic of the building typology in that certain area. For example a parking garages with sloping floors leads to disfunctionality and also serious inefficiency. A garage with sloping floor is an inexpensive and easy-to-construct system but the building can no longer be of use for anything else anymore. Hence the flexibility of space is not achieved in this case.

Charles Correa has once said, "Form follows climate" giving priority to the macro environment of an area which determines many aspects of a built form<sup>4</sup>. Hence, we shouldn't neglect certain factors including climate; in designing a public space. We should either respond to it or use it as an advantage. The degree of penetration of the sun into a public space plays an important element whether in designing or locating a public space. It associates with the preference as to where to sit, or not to sit. Users would follow the sun for the warmth in colder months and avoid it during the hotter seasons. Hence, social spaces should be carefully planned so it would be sun trap on colder seasons as also provide shades

when the situation demands. There should be a variety of spots in a public space with different kinds of condition so people could decide for themselves what qualities of experience suits their preference at that moment.

However, the level of sunlight and shade could be assisted by various urban design characteristic in a variety of ways such as the size of the open space, level changes, enclosed space by building mass, trees or other features within the space. Besides, the sun factor, the absence of wind and draught is also equally important as the opportunity to enjoy the sun. Movement of air around new buildings could cause discomfort for the user through the gusting and eddying which would radically alter the urban environment. Take for example, a fifty kilometer per hour wind at -1 degree has 6 times more chilling factor than still air at -12 degree. (Bentley et al. 1965)

When dwellers and people decided to head to a public space for a stroll or other activities, they expect to breathe in fresh air. Air quality is an increasingly important consideration in urban areas. Vegetation tends to filter air, while rainfall scrubs it. Good air circulation around building and within urban spaces could dissipate air pollution but it might conflict with the aesthetic desires for a sense of enclosure in urban spaces. There are also other forms of pollution, such as noise pollution, potentially detract the quality of the urban outdoors and should be addressed, particularly where the daily functions of city life are and densely concentrated.

The best public places appeal to the broadest number of people: young and old, residents and visitors, workers and shoppers, agile and handicapped. The optimum public space is in a block of city with given structure in the urban fabric to solid and voids, organized and well connected links between parts; while showing response to human needs and indigenous character of setting.

#### Endnotes

- <sup>1</sup> Cliff Moughtin, *Urban Design : Street and Square* , Architectural Press 3<sup>rd</sup> ed., Burlington, 2003, 99.
- <sup>2</sup> Derek Thomas, *Architecture and The Urban Environment: A Vision for the New Age*, Architectural Press, Woburn, 2002, 86.
- <sup>3</sup> *Op. cit.*, 83.
- <sup>4</sup> Vincent B. Canizaro, *Architectural Regionalism : Collected Writings on Place, Identity, Modernity, and Tradition*, Princeton Architectural Press, New York 2007, 109.

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