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**BOUNDARY AND SPACE**

- ABSTRACT -

This paper aims to provoke a re-thinking of an old and rather notorious question in urban architecture: Its the question about the spatial relationship between figure and ground, between building and urban fabric in the historic urban settings of Europe. It suggests a re-thinking in the light of new research in the nature of architectonic space.

**INCOMPLETE OBJECTS**

Buildings line streets and squares. They form patterns of mass and hollow, the raw-material of the historic city. Stringed together they form continuous street surfaces, significant buildings are given prominence by the privilege of having more than two sides to themselves.

In that kind of city the majority of buildings is stripped of their 3 dimensional object-quality by taking away most of their relating surfaces. Sometimes that loss is compensated a little by moulding the remaining surfaces into elaborate 3-dimensional facades luring attention away from their shortcomings.

These stringed houses are fundamentally incomplete objects, crippled architectural individuals which sadly form the standard condition of large parts of the European urban world.

No wonder these incomplete objects were - with the emergence of new concepts about space nearly a century ago - thrown overboard initiating fierce debates about freeing the architectural object, a debate that still runs today with unwaning intensity.

The world of isolated selfish objects proposed by the majority of modernists seems on the other hand as much incomplete as the world of the incomplete objects. The space surrounding the objects seems to be charged mainly with a one-directional relationship supporting the object and devaluating the surrounding space.

Both appear to disregard the obvious for the sake of supposed clarity: that space and its surrounding are not separate entities but intensely and inseparably intertwined.

**THE WORLD OF FIGURE-GROUND REVISTITED**

We want to focus here on the reciprocity of the space-object phenomena:

An important analytical tool for us is the theory of architectonic space proposed by Hans van der Laan more than 30 years ago but still widely unknown to the professional world. This theory combines the rational and factual with elements of perception.

In that complex and universal theory natural space is characterized by a strong verticality set against the limitless horizontal surface of the earth. Natural space is a fundamental matrix imprinted in man as his first habitat. Interior space - man's second habitat - turns this

natural (vertical) space sideways by 90 degrees to built up a (horizontal) relationship between walls.

Architectonic space generally has the task to complete natural space to adapt it to man's need for interior spaces. This completion of natural space is achieved through a precise definition of the characteristics of both and this definition is the fundamental task of the art of architecture.

The definition of the relationship between the two elementary kinds of spaces requires a demarking of their boundaries. Since two defined spaces - one always being outside the other - cannot have the same boundary to be perceived simultaneously, there is a certain distance, a space needed in between the two.

In other words: an architectonic (interior) space is not defined by itself alone through the mutual relationship of its surfaces but is defined by a perceivable relationship between interior and exterior space. This relationship is achieved not by a specific disposition of surfaces - surfaces have only one side - but of three-dimensional objects.

### FUZZY SPACES

This in-between-volume is the fundamental architectural matter, defining the relationship between the inner space of a building and the surrounding space. The relationship is characterized by a mutual dependency: the inner space draws its definition from being a separated part of the surrounding space, the surrounding space being the natural space of human condition.

In an urban setting the outside of a building is not a natural space (alone) but also an in-between space between other objects thus requiring an identity of its own and therefore a perceivable definition of boundary.

As a consequence the figure-ground reciprocity - responsible for much of our urban spacial thinking - must be reworked.

The boundaries between object and surrounding space are identical in the world of black and white, the mass - the building - has the same surface than the hollow - the linking space. For perception both cannot be defined simultaneously and equally by the same boundaries.

If one regards the in-between space of buildings also as a part of the architectonic quest the consequences are far-reaching. Suddenly the in-between space - squares and streets - have boundaries of their own. This phenomena of the mutual definition of the boundary of the black and the boundary of the white seems to have slipped the attention of recent debates between figure-ground enthusiasts and their opponents. Has that happened because it is not visible in the simple duality of the black or white world?

There is a dimension of reciprocity required that could illuminate the debate. The mutual definition of boundaries of object and space belongs to the world of the in-between, of the ambiguous, its the world of perception, the world of a certain fuzziness.

### REVENGE OF THE OBJECT

The city that has no in-between-spaces is like a stage-set, which, folded to form streets and squares, presents an attractive surface, but leaves the balance between mass and empty unanswered. This is not just an architectural problem of the object, but in an environment where there is no perception possible of its extension and composition there is only incomplete understanding. This may be one reason why so many 19th century city extensions produce an uneasy feeling, an overpowering of the masses, an claustrophobic environment.

The surfaces of the building, because they are only directed towards their own interior, recalling Alois Riegl's definition of the facade as a wall that points at a spacial extension behind, relate so much to building that the building, typologically belonging to the "texture" of a city, gain characteristics of an object and thus contradicting their own typological basis. But the "object-character" is only achieved in part because they are only partly visible squeezed between neighbours. The spaces in between, streets and squares - are also incomplete, because they are missing an architectural definition of their boundaries. This is city of the incomplete halves, of unbalanced reciprocity. This is the revenge of the untamed object...

## ANALOGIES AND ALLEYS

Interestingly the discourse about object and texture can be found in the arcadian world of the early 19th century classicism in architecture and in landscaping.

One example of an architect - besides the unavoidable Schinkel - who has explicitly thought about the relationship between object and urban tissue is Friedrich Weinbrenner (1766 - 1826), the most important classical architect from Baden, who made a number of proposals how to integrate perfectly proportioned object-buildings - a requirement of the classical ideal - into an continuous urban tissue. This led to the question of how to give an object and the surrounding public space equal architectural definition.

Weinbrenner's church at Karlsruhe's market square is as much an free standing object as part of the space shaping surfaces. It has two scales integrated, making as much a surface of the building and as a surface of the square itself. The space between the two is ambiguous: Seen from the church there is the impression as if the boundary of the surrounding space were visible from outside, from the square one feels as if the church stood "behind" its own boundary.

Weinbrenner's urban proposals are full of astonishing suggestions for an urban world of intertwining objects.

The tree-lined alleys of many parts of European landscaping are a different phenomenon all together but they are a workable (reverse) analogy of the definition of unequal spaces by object-like elements - the trees.

## CONSEQUENCES

For our work as architects the above briefly sketched re-thinking of urban space leads to a number of interesting and exiting consequences:

The street is not a space in between buildings anymore, but an architectonic "object", a room with analogous requirements regarding its relationships to the surroundings.

The building-building faces the street-building as much as the street-building faces the building-building. They are intertwined.

The discussion of "object"-focussed ("moderne") architecture versus "texture"-focussed (traditional) architecture - a simplified ideological battle - becomes finally pointless because we are now only dealing with just objects of similar nature.

There is no "facade-problem" anymore but an in-between-space that has two related surfaces, one defining the extend of the building, the other defining the extend of the street. The space in between belongs to both and acquires an ambiguous character.

This space is also the area of the interaction between "public" and "private", softening the sharp contrast between the two realms.

The re-thinking of the relationship between object and its surroundings has led to new solutions in our urban architecture introducing transitional spaces between the two that sometimes incline more to the

public, sometimes more to the private realm.