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DEFINING THE ARCHITECTURAL SPACE
GAMES AND PLAY OF ARCHITECTURE

DEFINIOWANIE PRZESTRZENI ARCHITEKTONICZNEJ
GRY I ZABAWY ARCHITEKTURY

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RAFFAELLA NERI*

THE COMPOSITION GAME

GRA KOMPOZYCJI

A b s t r a c t

In architecture, the word *play* is synonymous with *composition*, the object of which, as Le Corbusier wrote, is the "play of volumes seen in light". His definition, actually more articulate, precisely defines how this game should be played. An important, implied element is missing. The goal of the composition game, and of architectural design, is always and primarily the definition of *places*, which is the first and foremost goal of architecture. An educational experiment was devised to explore how the composition game can be used to achieve this goal.

Keywords: Composition game, Volumes, Places

S t r e s z c z e n i e

W architekturze słowo *zabawa* jest synonimem *kompozycji.* Definicja Le Corbusiera „gra brył w świetle", bardziej precyzyjnie określa reguły tej gry. Brakuje ważnego, ukrytego elementu. Intencją gry kompozycyjnej i projektu architektonicznego, jest zawsze i przede wszystkim zdefiniowanie *miejsca,* co jest pierwszym i najważniejszym celem architektury. By odkryć, jak gra kompozycyjna może być zastosowana do osiągnięcia tego celu został stworzony eksperyment edukacyjny.

Słowa kluczowe: kompozycyjna gra, bryły, miejsca

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1. The rules of the game

Associated with architecture, "play" immediately evokes Le Corbusier's famous quote about the "play of volumes seen in light" [3]. Architecture is a playful art; what do architects do, after all, if not play and extend the blissful state of childhood by enjoying the pleasure of play? However, Le Corbusier's extraordinarily insightful statement has become, at the same time, the source of a major misunderstanding. Why is that?

First of all, because the quote is more often than not truncated and bereft of a vital part of the definition. As clarified elsewhere [4], the game architecture plays must be "skilful, accurate and magnificent". Like any game, it implies rules the players are expected to be aware of as they define the boundaries within which they can move. Just like a sport, it requires constant practice and dedication. Even more important, like any game, it has a goal all the players agree upon and share, and strive to attain by following the rules specifically designed to that end. That also describes how architecture works.

But what is it that we find so captivating within such boundaries, and what is the source of the pleasure we get from it?

There is something fundamental about any game, with the exclusion of games of chance, and that is what delights children, who play to grow up, and attracts adults – the fact that you don't know how the game will turn out, and that any game produces new situations, and leads to ever different and unexpected solutions, to pursued but unforeseeable configurations, to uncertain and sometime surprising outcomes that are greatly influenced by creativity and imagination.

Playing means embracing challenge and discovery, and that is why we derive so much pleasure from it, the pleasure of knowledge. The more articulate and complex a game gets, the more remote and seemingly unattainable its solutions become; the more adventurous its development, the more powerfully attractive it becomes along with the pleasure of discovery. And that is exactly the reason why play is such an irreplaceable activity for children as an essential tool of knowledge.

The same applies to architecture: an activity of knowledge that feels like a game when we practise it, a game that leads to ever different outcomes, the solution of which is, every time, an astonishing conquest, the revelation of a hidden and deep aspect of our world and ourselves. Like any game, architecture also has a goal, as well as rules and principles, to achieve.

2. The composition game

In his statement, Le Corbusier spelled out how and by what means that game must be played, and proposed a string of adjectives that also characterize the essential quality of its outcome, its actual goal: the play of volumes, seen in light, should be *magnificent*, the volumes should be composed so as to produce a well-conceived layout, because it is the quality of such layout that makes the game's outcome outstanding, it is how the volumes are combined, their *composition*, that makes the resulting architecture magnificent.

The quality of architecture, its magnificence, is obtained by playing; architecture's beauty, or expressive quality if you like, results from the disposition of volumes and their precise interrelation. This idea has its roots in the French culture of Enlightenment, starting from Diderot [2], who pointed at the *relationship* of parts as the element responsible for beauty, to Boullée [1], who used composition as architecture's primary tool. This notion implies that

beauty is a relative, rather than an absolute, value, and recognizes its cause in a *relationship*. No more absolute geometries or values, no more faithful copies, no more imitating other forms of nature – just a question of relationships.

This is a quite general, almost formalist, definition, as it insists on the source of a formal quality, but fails to investigate the goal of laying out and relating the elements in such a way that they produce beauty.

3. Composing places

Therefore, I would like to discuss this specific aspect implied in Le Corbusier's definition of architecture, quite formalist itself, that insists more on the game's rules and means than on its reasons and goals.

I would like to clarify the general and not openly stated goal of the "play of volumes seen in light". What do the mutually related volumes produce, and what should be *magnificent* about them*?*

The composition of volumes generates *places* as well as architectures – it shapes and gives identity to the spaces between the volumes. In architecture and in any other art, identity strictly means formal precision, and results from the definition of forms and the relations between forms, volumes, parts.

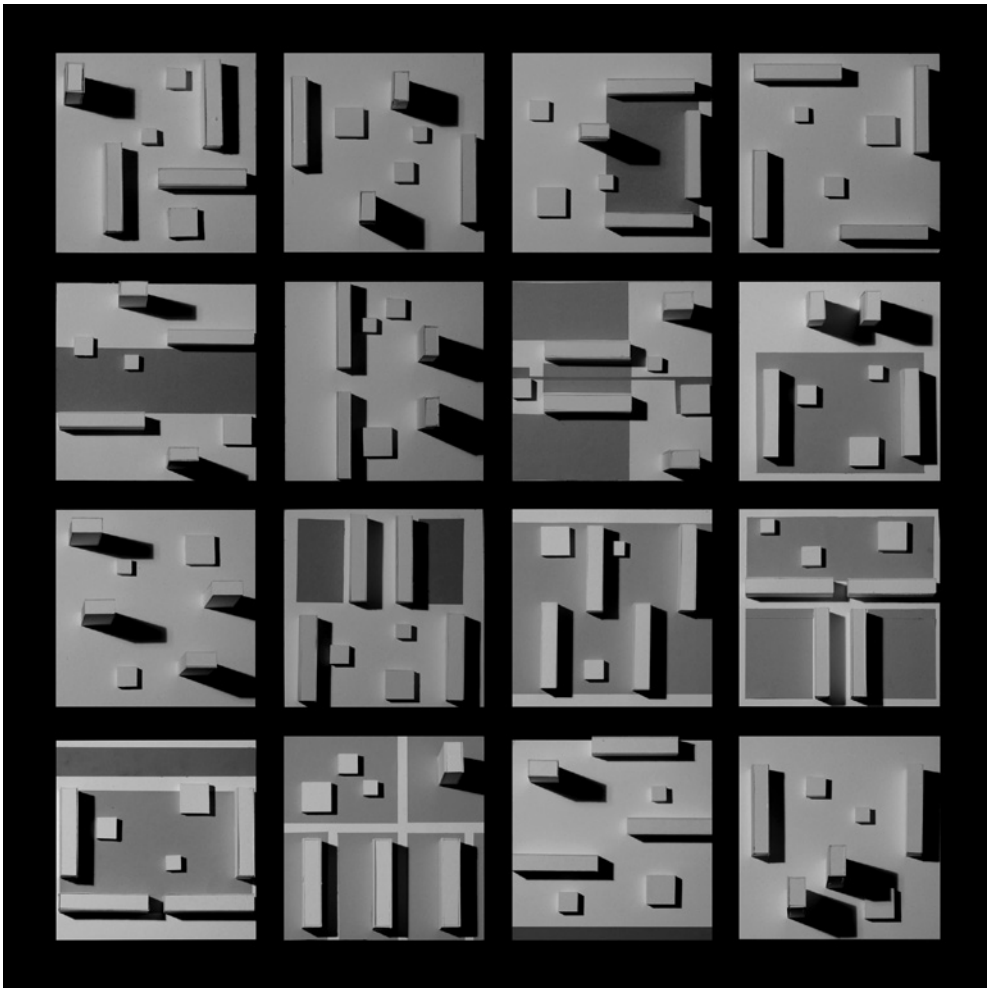
What can and must be *magnificent* is the disposition of volumes, which is the composition game's primary element. Such disposition should generate spaces endowed with greatness, beauty and splendour, spaces that produce emotion, as Le Corbusier said: in one word, *places*, spaces with a character, an identity, a recognizable and expressive form. Places that can be the theatre and the mirror of human life.

This is precisely architecture's more general and primary task: building *places*, shaping spaces in a meaningful and recognizable way, as required by their programme, both within the buildings and in the space between them, both inside and outside, in both domestic and urban, collective and civil spaces.

Buildings, volumes and structures of any size and type contribute to the achievement of such a goal. This also applies to an individual free-standing building, that can never be considered as a free object in space indifferent to its surroundings; as an architecture, its fundamental quality rather relies on the ability to transform and organize the space around it, to provide it with form and identity, by deriving the reasons of its own architectural and formal definition from the characters of that place.

Palladio's Villa La Rotonda, isolated on a hill, or Villa Malcontenta, free-standing in the country, precisely define the location where they were built by establishing orientations, hierarchies, focus that give their sites measure and recognizability, form and identity, and by appropriating and enhancing their characters. Another example is Palladio's Basilica in Vicenza, the mere presence of which in relation with the neighbouring buildings articulates space in several separate and connected squares. Equally, although in different forms, an isolated farm in the country or a votive chapel alongside a road create a landscape as they establish a rhythm in a path and become landmarks.

Any building extends an influence over wide and far-away spaces – a royal villa opens long and deep perspective views, while a castle on a hill dominates an entire region.



Ill. 1. Composition games. Works of the first year – Laurea Magistrale - Architecture students, School of Civil Architecture, Polytechnic of Milan

In other words, architectural design is never about the individual building, it is rather about the *place* where the building will rise, the more or less extended empty space it will control, that in turn will be newly defined, shaped and identified by it.

In this sense, the city may be certainly considered as a *succession of places*, the primary playground of this composition game: greatly varied, linked to one another, either collective or private, open or enclosed, large or cramped, etc. Their individual character, diversity, adequacy and formal precision represent the richness and beauty of a city, they define its structure and urban qualities.

Composition, or the play of volumes, is the fundamental process that uses buildings to define, organize and identify *places* – it controls their spatial qualities, measures and

proportions, it decides the distances between them, the void/solid, open space/built space ratio. This is exactly the meaning of architectural composition: to provide an empty space with structure and form, to organize spaces, to define places.

By the same token, places only acquire an individual character through the composition of buildings, through their ordered design, where ordered does not mean abstract, or geometric, but identifies how a narration is developed, a character is represented, an idea of a city is built.

The composition game is just as important as architecture in the definition of places: the city exists in its places, places that cannot exist without architecture.

4. The city's places

This is a core issue, too often pushed into the background, that architecture has been confronted with in the contemporary city: the city must redefine its *places*, the principles of its construction and composition, the relationships between its sectors and its volumes, the principles underlying its residential districts, its centres, its squares or their modern equivalents, its collective open and public places. What relationships are relevant in the contemporary city? What kind of composition principles could be used to create its places? How could they be identified?

I believe this unresolved issue should be our concern today as it affects how the city is viewed, how its parts, the elements that constitute it, should be built, its territorial scope and its openness, how it should integrate green and rural areas, parks and gardens, and what identity and characters these should have[1].

Rather than indulging in the formal overtreatment of individual architectures and buildings, we should focus on how buildings relate to each other, the kind of places such relationships can generate, their composition. That would mean reclaiming architecture's responsibility in building the places of human life.

This effort is necessary both for new residential developments and for the collective places these necessarily include. By accepting this challenge, we would reconnect with the history of the European city and with the work started during the twentieth century on its residential districts, and more sporadically on its collective urban spaces, when the historical city's compositional principles were challenged by Le Corbusier in his plan for Chandigarh or by Mies van der Rohe in his squares.

5. An educational experiment

In order to explore this line of thought and refocus on compositional principles and the relations between volumes as keys to define places, during the last academic year we devised

[1] See the research about the residential units of the city published in the books: AAVV *La casa. Forme e ragioni dell'abitare*, Milano 2008; *La Casa. Le forme dello* stare, Milano 2011; *La Casa. Forme e luoghi dell'abitare urbano*, Milano 2013; *La parte elementare della città. Progetti per Scalo Farini a Milano*, Siracusa 2014

an experiment with the first year Architecture students at the School of Civil Architecture of the Polytechnic of Milan.

We followed Le Corbusier's instructions quite literally to compose abstract volumes, with no indication of type or program, to define places as a consequence. In other words, we laid out certain volumes, by number and size, in order to explore the compositional principles that could be used to define *a place*, in particular an open space, for the contemporary city. We primarily studied the definition of places as based on different compositional principles, and pursued this goal by adopting the "play" suggested by Le Corbusier.

The experiment was based on a meditation about the urban square as the ultimate *place*, a space for community life that, in all its different iterations, perfectly identifies and characterizes the city. We wanted to find out about the principles that recur in the composition of squares across history, to identify how a typical way of defining and composing elements could create characters as common and meaningful as those of buildings.

We started once more from Le Corbusier and from his treatise that compares the most famous *squares* in history, Pompeii's Forum and Athens' Acropolis, assuming the Acropolis is indeed a square: two places resulting from opposing principles – a famously debated question – that express contrasting compositional characters and potentials. Pompeii's Forum is based on an idea of enclosure and division, of an inside as separated from an outside, and a quite recurrent and typical model for a great number of squares across history. The Acropolis has been a model and an inspiration for many modern architects, from Schinkel to Mies van der Rohe, to Le Corbusier himself, perhaps because it can articulate space and generate multiple separate places open to their surroundings, and also because it is alternative to the city made of blocks [5].

But, again, this would seem another formal game, as such independent from a specific place and a precise program, in terms of the activities that will be accommodated.

The game is deliberately refocused on the composition of volumes only, defined in their size but independent from a specific program, because the idea is to explore the possibilities of composition in a way that is as general and abstract as possible. The idea is to shift the focus on the centrality of composition, on how the relationships between volumes impact the definition of places and identities, rather than on the volumes' own architecture. And in this way to shift the focus from the definition of individual buildings, their distribution, operation, construction, materials and façades, to architecture's core issue, how *places* are defined by precisely related buildings, designed to become architectures.

This exercise is designed to explore the shapes, essentially to test the potential of composition, the possibility to create spaces with different qualities based on how the volumes are laid out and relate to each other.

We started from a non-descript 210x210 metre site, in other words a typical large block of the contemporary city, and seven volumes four measuring 90x30x15 meters, and three measuring 30x30, 20x20, 15x15 metres each, 9 metres tall. Water and green spaces could also be parts of the equation.

We used these few elements in our composition game designed to explore what and how many places could be defined and what principles could be used to create different identities for this site, to define one or more places with specific identities and characters, and to find out how many variations would be possible.

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