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## ELEMENTS OF GAMES: IMAGINATION STRATEGIES FOR ARCHITECTURE

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### ELEMENTY GIER: STRATEGIE WYOBRAŹNI DLA ARCHITEKTURY

#### Abstract

The essay is about the deep analogies between the world of games and the way architects deal with projects through the discipline of composition. Elements, rules, relationships are devices belonging to both; but also strategy, analysis and most of all imagination are basic instruments for playing games and for designing architectures, as shown in the interpretation of some works by Adolf Loos and Le Corbusier.

*Keywords: chess, Loos, Domino, redent, Le Corbusier, imagination*

#### Streszczenie

Esej traktuje o głębokich analogiach pomiędzy światem gier, a sposobem, w jaki projektują architekci. Elementy, reguły, relacje są narzędziami przynależącymi obu dyscyplinom. Także strategie, analizy i wyobrażenia są podstawowymi instrumentami w grach i projektowaniu architektury, jak pokazano na przykładzie interpretacji wybranych prac Adolfa Loosa i Le Corbusiera.

*Keywords: szachy, Loos, Domino, plomba, Le Corbusier, wyobrażenia*

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## 1. Chess as metaphor for architectural composition

“The plan is what in a game of chess is the opening: it is the beginning of the game, or, as in Vitruvius, the act of putting in order the architectural themes inside the architect’s mind (...), the taxonomy of the primary elements”[5, p. 19]

These words by Luciano Semerani are the strong beginning of the first chapter of his book *Lezioni di composizione architettonica (Architectural composition lectures)*, titled “La grande pianta” (“The big plan”). It’s very interesting that a book about composition begins with an analogy between a game and the discipline of architecture. Of course it’s a unique game, with each element/piece with its own characteristics (from its form, recalling the military origin of the game, to the way moves are made, to the possibilities of attacking the enemy’s pieces...), with a precise set of rules and with a very definite place where the pieces are set up. It’s clear, for everyone who deals with the discipline of architecture, the analogy that Semerani suggests: architectural composition is actually the arrangement and organisation of a series of elements according to some principles and rules, for a very precise aim, to take place in a very definite and precise place (from the piece of paper to the piece of land where the building will be). But tactics and strategy, typical of a chess game, are conceptual actions also belonging to the architect’s work, useful in the interior struggle of the architect himself while he draws, but, in a more prosaic way, also when he has to deal with laws, clients, or builders.

But another instrument is absolutely necessary for the chess player, and of course, for the architect: imagination.

Imagination is, effectively, a basic component of every game: when the little boy plays he imagines a world, imagines a story, imagines a virtual reality where the action takes place<sup>1</sup>. Imagination is the intellectual device through which the game becomes a story, becomes a theatrical play (and it’s very interesting the analogy, in the English language, between game and theatre, inside the word “play”), becomes a narration.

So, imagination is the instrument of our mind which gives us the possibility to create something new, but also to see before, to anticipate the future, in order to take the right decision, to make the perfect move. That’s what we find in Hilary Putnam’s words: “A man is climbing a mountain. Halfway up he stops, because he is unsure how to go on. He imagines himself continuing via one route. In his imagination, he proceeds on up to certain point, and then gets into a difficulty which he cannot, in his imagination, see how to get out of. This time he is able to imagine himself getting all the way to the top without difficulty. So he takes the second route”[4, p. 85–86].

Imagination, therefore, is one of the climber’s most precious qualities: and the same is true for the chess player who has to analyse the game’s situation and then imagine the consequences of his moves, foresee and anticipate his opponents’ strategies. And the same happens again in architecture. Architects must have a vision of the future, at the small scale of the building but also at the big scale of the society. And this can be possible through the knowledge of what they are dealing with (thanks to analysis), but most of all through imagination, which can help in finding answers and solving problems. As Antonio Monestirolì recently wrote, “imagination, based on a rational analytical system, can produce architectural projects, as an hypothesis for a transformation of reality” [3, p. 140].

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<sup>1</sup> One of the most intelligent (and funniest) descriptions of this virtual reality set up by children is in the “Calvin&Hobbes” comic series by American cartoonist Bill Watterson.

So analysis and imagination are the primary instruments for the compositional arrangement, for the narrative sequence, for the “masterly, correct and magnificent play of the masses”. Like in the games which people play.

Getting back to Semerani and the chess analogy, he finds that the starting point, when the architect has to draw a perfect plan, is to move, like a chess piece, the staircase: “the opening of the game depends on the number and position of the stairs. Their configuration is free from symmetry, and the dynamic asymmetries of the interior spaces depend on the thematic diversity which every staircase puts inside the geometrical solid (of the house)” [6].

To support this statement he takes as an *exemplum* the work of Adolf Loos, in particular the projects for the villas of the twenties. Here we can find not only one staircase, but several, three, four, five staircases. Each one has its own characteristic, each one has its own function (connecting the floors, also for a small difference of height, in order to build the *Raumplan*), but also it’s a device of spatial arrangement, it’s an architectural place itself, which builds relationships with the rooms, corridors, and sometimes with the openings towards the external world. In the matrix of the villa’s plan (the chessboard), they are fixed elements and spatial references points, and around them flows the hierarchy of the domestic interiors: the entrance hall, the living room, the master’s room, the lady’s room, the maid’s room, and so on. Like the pieces, in tension between each other, placed on the chessboard.

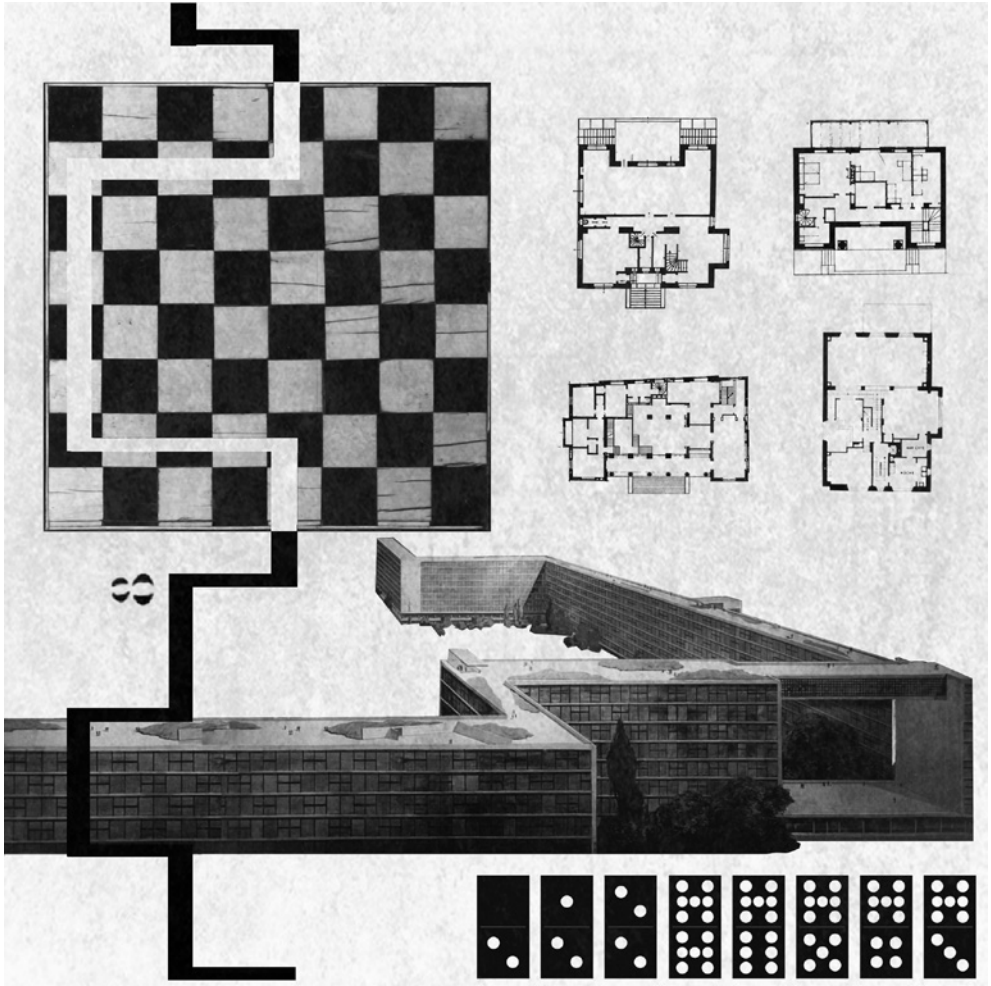
## 2. Domino, domus, dom-ino

But speaking of games in relationship with the discipline of architecture, there’s another famous analogy, coming from Le Corbusier, which can be put in dialectic comparison with the chess game’s compositional strategies: the *dom-ino* system.

In *Vers une architecture* Le Corbusier publishes, back in 1915, the project for a “group of mass-production houses in reinforced concrete” set on a *dom-ino* structure [2]. The basic principle proposes a high abstraction of the elements, the pure column and the pure floor; their rational composition allows, as will be set out a few years later in the “five points”, the detachment from the ground but also a free composition of interior spaces (free plan, free façade) of the house, and a free composition of the houses in huge complexes that can build a new city. It’s clear the derivation of this proposal from the domino game: at the scale of the house, where the rectangle of the cell, with the dots of the columns, resembles clearly the domino piece; as well in the urban scale, when the cells are arranged side by side, as happens in dominos, building a various-shaped line which passes freely through space.

Le Corbusier takes this analogy from his studies of Eugène Hénard’s books, written between 1903 and 1911, about some urban proposals for Paris [1]. Hénard himself speaks of the game of dominos as an example for new spatial building arrangements, which can move back and forth from the straight lines of the streets of the city: the uniformity of the traditional image of the city is broken, new spaces are created between street and building, a variety of perspectives become the solution for the problem of the *rue-corridor*.

We read in *Vers une architecture*: “Instead of our towns being laid out in massive quadrangles, with the streets in narrow trenches walled in by seven-storeyed buildings set perpendicular on the pavement and enclosing unhealthy courtyards, airless and sunless wells, our new layout, employing the same area and housing the same number of people, would show great blocks of houses with successive set-backs, stretching along arterial avenues. No more



III. 1. "The elements games", collage by P.M. Martinelli

courtyards, but flats opening on every side to air and light, and looking, not only the puny trees of our boulevards of today, but upon green swards, sports grounds and abundant plantations of trees". [2, p. 61–63]

Starting from these issues Le Corbusier, from the twenties, works on the double scale of the *dom-ino* system: at the architectural scale, the *pilotis*/slab system is the basis for almost every project, from the small villa to the huge public palace; at the urban scale, the figure of the moving line of the domino game (built through the aggregation of the small pieces, arranged side by side) is transformed in the building type named *redent*.

The *redent* building will be one of his most widely used residential building types, until one of the last urban projects, the international competition for the centre of Berlin in 1958. It appears in the fourth volume (1938–1946) of his *Œuvre complète*, together with other building types, as one of the *outils* useful to build the new city, against the traditional one. The “table” on which the *redent* architectural domino game is played is the city, of course: the tension between the grid of streets and pathway is at the same time a compositional statement, a functional answer to the problem of circulation in contemporary times and an innovative proposal for the construction of a new image, made of spaces, relationships, views, green areas, for the city. It is, most of all, a wonderful work of imagination, which looks forward from the actual situation towards new scenarios. But the game can also be played inside nature, completely inside the landscape: the *redent* building type is an open architectural form which can relate freely, without any limits, with the elements of landscape, as happens in Algiers, or in South America, where the line of the building become soft and curvy, transforming itself into a harmonic piece of the new, and at the same time natural and artificial, landscape.

## References

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