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Paper: **POPULAR DWELLING CHROMATICISM**

Topic: Architecture

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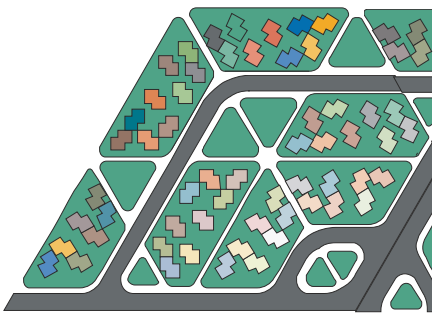
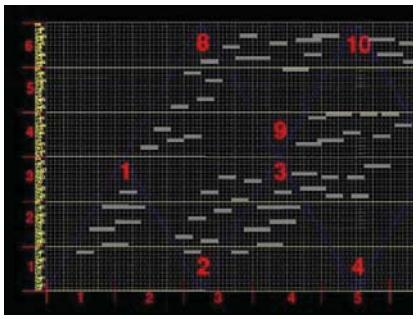
References:
[1] Pedrosa, Israel, "*Da cor à cor inexistente*", Editora Universidade de Brasília, Brasília 1989
[2] De Grandis, Luigina, "*Teoria y uso del color"*, Ediciones Cátedra, Madrid, 1985
[3] Machado, Arlindo, "*A Máquina e o imaginário*", EDUSP, Editora da Universidade de São Paulo, São Paulo, 1993
[4] Sanz, Juan Carlos, "*El linguaje del color*", Hermann Blume – Madrid, 1985
[5] Dauven, Jean, "*O poder dos limites"* Editora Mercúrio, São Paulo, 1990

Abstract:
The colour has always been one of the greatest protagonists in the perception phenomenon, being often used as a reference to describe a place, to provide an indication, to identify a specific house among its neighbourhood. This article presents a method to define popular houses facades chromaticism, based on **an analogy between colours and musical notes**. The starting point is a 72 colour palette, obtained by mixing chalk to a very cheap pigment, called *"pó xadres",* and then establish an equivalence between these colours and a musical scale.
In spite of being difficult to compare such different physical features, like colour and sound, a vast literature is available about this subject. Both PEDROSA (1989) [1] and GRANDIS (1985) [2] describe the analogies proposed by Newton and Goethe, who considered colour and sound as vibration phenomena, although in different frequencies. MACHADO (1993) [3] refers to **sinestesia**, an unified theory of all sensory perception and LAGRESILLE (1983), apud SANZ (1985) [4], establishes a parallel between musical octaves and the brightness of colours, proposing to associate the lowest notes to the most saturated colours, while the acute ones should correspond to the clearest.
The relationship between sound frequencies and colours wavelength adopted in this paper, is the one established by DAUVEN (1990) [5], in which he creates a correspondence between musical scale, composed by twelve notes (including the semitones), and a twelve colours set, arranged around Holzel's circle.
Starting from these assumptions, the popular dwelling chromaticism is performed according to various **generative criteria**, showing that, for every applied algorithm, a specific result is obtained. One among these methods adopts the plant as a piano roll, proposing each unit to be painted in the colour of its corresponding note.
Under this optic, if music composition is based, in its essence, on the ability of manipulating very precise numerical relationships, the examples presented in this paper show that creative solutions should be achieved in architecture using similar equations and including colour modular coordination principles in the design process.





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