Abstract

Neo-Plasticity and Its Architectural Manifestation in the Luis Barragan House/Studio of 1947

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Does your hometown have any mathematical tourists attractions such as statues, plaques, graves, the café where the famous conjecture was made, the desk where the famous initials are scratched, birthplaces, houses, or memorials? Have you encountered a mathematical sight on your travels? If so, we invite you to submit an essay to this column. Be sure to included a picture, a description of its mathematical significance, and either a map or directions so that others may follow in your tracks.

Luis Barragan (1902–1988), born and raised in Guadalajara, Mexico, was a modern architect whose works have influenced contemporary building designs in his native country and beyond. His architecture responds to the contextual and natural inheritance of Mexico, signifying a new residential dwelling predicated on modernity and indigenously rooted in the symbol of Mexican living. The manner in which his buildings are integrated within their given “place” is perhaps the key factor in his significance and renown. While drawing from cultural and regional references of Mexico, Barragan offered a utopian vision of the unification of the vernacular Mexican style with architectural purity and simplicity. Stucco walls with bricks, intense saturated colors, and natural illumination possessing a spiritual quality defined Barragan’s designs. Barragan continues to exert a profound influence on contemporary architecture. (See [4], [6], [7] and [8].) His vision has inspired some of the best-known contemporary Mexican architects including Ricardo Legorreta, Andrea Casillas, and Enriqu;e Norton of TEN (Taller Enrique Norton) Arquitectos, among others.1 Ricardo Legorreta is among the disciples of Barragan who make use of his sense of color, spatial composition, and design vocabulary.

Among Barragan’s work, his own house and studio stands out for its interplay of abstract planes and bold masses. Its colorful walls provide internal rooms and patios with pleasant filtered light. Barragan writes, “I have left large plane walls without window openings, both for plastic beauty… . By the use of large wall surfaces one can also obtain spaces with varying luminosity, which creates an ambience more comfortable and intimate.”2 Barragan’s architecture is associated with two primary connections. The abstract neo-plasticity of De Stijl and Bauhaus strongly inspired the geometry of the house, whereas Barragan’s association with avant garde artistic circles, which included Diego Rivera, Frida Kahlo, and José Clemente Orozco, infused him with indigenous culture and regional principles.

Mathematical Intelligencer readers may wonder why this house is the subject of an article. Although much has been written about the Luis Barragan house/studio, most studies of the house are descriptive presentations lacking formal and mathematical
