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Study of the relationship between natural light and green windows at traditional Iranian architecture

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Light is considered as the manifestation of God. A glance at Iranian traditional architecture with around six thousand years of history shows the richness of this architecture in many aspects of design including the way it provides natural light for the building. In traditional architecture, people showed great respect to nature and nature had a major effect on shaping of their buildings, especially in terms of climate and attention to the four elements (sun, water, wind, earth) so that Iranians had a great respect for the sunlight since long ago. Before and after Islam, Iranian architecture was spiritual and inspired by light. Light is the symbol of God and a sign of spiritual and holy places, so that in Iran's Islamic architecture is expanded to a great and beautiful extent, inside the places and gives a spiritual atmosphere to the heavy spaces. The aim of this paper is to discover the secrets of light in architecture in Iran. From all Iranian places including castles, bathrooms, passageways, bazaars and gardens, three types i.e. mosques, houses and schools were chosen as case studies. The methodology of this paper is research developing. After survey of several windows in traditional light in Iran, role of daylight in Iranian traditional architecture in 1500-year historical period was finally evaluated; the result of the researches will be presented in two parts. Firstly, light is lexically defined and its status in Iranian culture in two historical periods of before and after Islam is examined; classification of historical age in Iran and the way light is used in each period. In the second part we review the light usage and classification of historical monuments such as; mosque, house and school. The philosophy of light in Iran in the pre and post-Islamic periods affected the window's shape and led to the creation of 20 different kinds of windows with the functions of lighting. As conclusion should say, In Iranian mosques, light didn't enter the main courtyard directly for the following reasons: (1) Giving more spirituality to the mosque; (2) Controlling glare in mosques; (3) Creating a peaceful environment; (4) Climatic functions and controlling the heat (especially in warm dry climates); (5) Function of beauty and play of light in a variety of ways. In Iranian houses, in addition to playing and breaking the light, it is tried to create a beautiful interior by mixing the daylight and colored glasses. Light enters traditional Iranian houses in four patterns from view point of comfortable. In Iranian traditional architecture, daylight was given more importance with an attempt to enter daylight delicately into the building. Unfortunately, we do not see this today. In modern Iranian architecture, it is better to pay more attention to light in different places especially educational ones and suggest suitable guidelines for tackling glare in educational places. Even today with the help of new construction material and all different technological devices, our present buildings are very expensive to build and costly to maintain.

Biography

Rozita Farzam has been graduated in the Industrial Design from the University of Art in Tehran and has completed her Master and PhD from the University of Kobe Design, Japan. She is leading the design of Gensai products in Iran, which is also in partnership with the SDAFST Association in Japan. Her field of work is in product design, interactive design and creativity in packaging design and lighting. She has a membership in scientific and executive teams and judges at national and international conferences and competitions and has numerous articles in the field of design and environment in her scientific work, as well as a collaboration with packaging companies in Japan and she is teaching at the Design College Japan, as well as joint Iranian and Japanese workshops on lighting, packaging, origami and Gensai design to promote Japan's rich culture among Iranian students and to collaborate on collaborative research projects with Japanese universities.

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