

Light Play

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Abstract

The paper focuses on understanding the quality of user experience during the whole period of engagement with the product-in this case a lamp. One of the characteristics of modern society is its life under artificial light. What is light but an interaction a multi-sensorial interaction? It is cultural; it is emotion and sensation together. Emotions are memory, place, people, light, touch, and aroma all together. We are rooted in the continuity of time, and it is the task of the designer to facilitate this experience. Light is regarded as metaphor of truth. The new lighting should “penetrate the surfaces of popular tastes and values”. The new light should emerge from our memories, imaginations and dreams; it should re-sensitize architecture and invite sensory intimacy. The lighting designer today should sculpt stories with light.

And build a “new sensibility that can turn the relative immateriality and weightlessness of recent technological innovations into a positive experience of space, place and meaning”.

The projects are a search of “light” rather than a “lamp”. The idea is not “constant” but “variable”. There is a clear indication of changing modes of consumption in consumers today; the semantic issue takes precedence in people’s minds over technical ones. There is a need for uniqueness and individual environmental expression. Borrowing from the traditional oriental spaces and of course taking inspiration from light play one sees in nature, it is challenging to create something that is beyond servicing practical or a functional role but has the power to appeal directly to the human spirit. Through series of real projects carried out by the author and his students the attempt is to see how light can play an emotive and more encompassing role within an environment. In the resulting light in space, the observers are free to perceive what they see in their own way and with their own association to the experience.

Will the sun rise again?
Will our old friend the dawn come again?
Will the power of darkness be conquered by the God of Light?
(From an Indian Veda ca 1500 BC)

In India, sun is generous, it is the god of life, and millions of Hindus even today sing their worship to sun god “Surya”. A symbol of “Surya” and “Agni”, the lamp plays a very important role in Hindu life. . The sanskrit term ‘Aloka’ alludes to quality of ‘shining’, to glow. It also means cosmos; light and radiance are its attributes, an entity which has the capacity to emit light and illuminate the ‘loka’, or the world. If you have been to city of Banaras or Varanasi, “there is little in the world to compare with the splendour of Banaras seen from the river at dawn. The rays of the early morning sun spread across the river and strike the high banked face of this city, which hundreds call Kashi- the luminous, the city of light. Kashi is light, they say. The city illuminates truth and reveal reality.”

Travellers who have been to city of Agra, and visited the Agra fort, would have seen the Shish Mahal or the Glass Palace. This was constructed by Emperor Shah Jehan in 1631-40. The name is derived from the fact that its ceilings and walls are covered with innumerable pieces of mirror set in the plaster. Minimum openings were kept to necessitate the use of artificial light, which was essential to obtain the picturesque effect of the glass work. The Shish Mahal comprises of two large chambers, light penetrated only through two doors and a ventilator in the southern wall near the ceiling. Each chamber had a marble reservoir for water. Water coming through an inlet fell into the tank sunk in the wall like a continuous sheet. From here through another channel the water fell into another tank. Two series of candle niches were also provided. Candles burning behind the falling water created a gorgeous effect. From the tank in the inner hall the water then flowed through a long canal into the tank in the outer hall. Both these tanks had fountains, which added to the mysterious effect of light. *Light play was understood by architects even in those days.*

“The great festival of “Diwali” or “Deepavali” meaning a row of lights is celebrated with enthusiasm in all parts of India. This is the day all wait for the goddess of fortune to their homes and their workplaces. As evening approaches, each household puts out its rows of lights, lining the rooftops and window sills with the small single wick oil lamps for which this festival is famous. Even the poorest household will have a lamp or two, and the richest may replace the simple oil-lamps with festive, even garish, strands of electric lights. In this way the darkest night of the month is made brilliant, to welcome “Lakshmi” for another year”. *The light play in this festival weaves magic.*

As a child I saw my grandmother light a lamp every morning and pray to “Surya” and “Agni”. She would do her “Aarati” holding the lamp in both her hands and waved repetitively in front of the image of the gods. *This was my first conscious experience of light play.* When I went to a temple with her, I would see elaborately fashioned lamp structure with multiple cavities being used by the priest for performing the ritual of aarti. *The light play, became more elaborate, as many lamps together were being waved repetitively*

As a young boy, I would eagerly wait for “Diwali” festival so that I could play with light.

We were allowed to play with light. I spend much of my time alone engrossed in an imaginary world. During the nights, I would very often look up into the sky. The moon fascinated me. When I was thirteen I discovered the world of Van Gogh, and one of my favourite painting was “The Sun of Arles. Whenever I was sad I would go to the riverbank, and sit there gazing at the light play on moving water.

My first job as a professional designer was to design light fixtures or lamps at Philips. The task of designing lamps was not as simple as I initially thought it would be, “for it is not easy to bring light where it is needed. Because for that it is necessary to make a large irritating gadget which is rather fragile even though it only has to bear its own weight- and it has to hang there, whether it is in use or not.”

I designed many light fixtures...more solid forms, all were manufactured and sold well.... They used hardy, industrial materials metal, plastics....there was only play of form. Light was always constant. Electric Light is always constant. *I had forgotten the light play in my search for good form.*

The new lighting landscape must be brought into harmony with the rhythm of the seasons, of sunrise and sunset, day and night and restore the balance between us and our environment. The oriental disciplines of sensibilities grew out of the feeling that men lived fully by opening themselves to the universal rhythm of nature

An order and simplicity underlies all natural phenomenons.

Natural light is constantly weaving a magic of colours. Moonlight is cosmic, cold and frail. Moonlight is a soft light. At twilight there is no glare and no shadows. There is a soft, emotional atmosphere. Sunlight is like a billion watt bulb. A single electric bulb in an Indian home is a replica of the sun. *Electric light within built space is always constant; it weakens the experience of time.* Lighting has to be an integral part of our life, a thing dynamic, not static, it lives, it changes, it expresses- it brings inert spaces to life by relating them to human spirit.

What is light but an interaction- a multi-sensorial interaction? It is cultural; it is emotion and sensation together. Emotions are memory, place, people, light, touch, and aroma all together. We are rooted in the continuity of time, and it is the task of the designer to facilitate this experience. Light is regarded as metaphor of truth. The new lighting should “penetrate the surfaces of popular tastes and values”. The new light should emerge from our memories, imaginations and dreams; it should re-sensitize architecture and invite sensory intimacy. The lighting designer today should sculpt stories with light. And build a “new sensibility that can turn the relative immateriality and weightlessness of recent technological innovations into a positive experience of space, place and meaning”.

Student’s projects

The next generation of interactive design will employ embedded computational power in various environments’ in our home, public spaces or in the lamps themselves. There is a huge potential for the future of what we do in terms of building and designing of lights that we use for enhancing our living environments and enhance our experiences of these spaces. Following are the student’s projects that

were chosen for presentation here based on their clear understanding of using light to enhance the experience of time.

Project 1: Projected Reflections

Student: Thomas George

In 'Isha' Upanishad, one of the most famous Upanishads, we have a description of something that moves and at the same moves not: '*Tad ejati tan najati*'-*"That moves and that moves not. That is far and that is near. That is within and without."* The sun god is also the god of flight, and he performs his task like a beautiful bird. Time and space are covered by the wings of the sun god.

The use of reflective surfaces such as mirror paper of various colours and a chrome plated sheet to project reflections on a screen or wall were attempted. The paper was placed on the table and either one or two spotlights were used to produce the reflections, the angles of light incident on the reflective surfaces were manipulated to produce the clearest reflection on the screen. The projected reflections off the undulated chrome plated sheet produced an almost three dimensional quality that is remarkably similar to computer simulations of an organic form folding in on itself.

A series of coloured reflective paper was used in sequence moving horizontally along the table surface towards the light source. The effect produced by the projected reflection is that of an animated column of light that continually changes hues as the frames advance. A primitive simulation of the aurora, the spectacular natural phenomenon that has few parallels in terms of sheer beauty, was achieved.



Fig 1: Reflected Effects

Project 2: Reflections inspired by “City of light –Banaras”

Student: Gauri Tiwari

Water is the foundation of the whole world, from the waters arose all plants, all life. Banaras or ‘Kashi’ is the city of light, city of death and liberation. The concept was based on reflections on water and was also linked to sustainability, to reuse, to the changing hues of colours on river “Ganga” from sunrise to sunset. The new lamp creates a mirage, the light becomes new aquatic realm, and the viewer finds a new way of enjoying the water. Image of water exists in this light.



Figure 2: ‘Kashi’ Lamp

Project 3: Natural –Artificial: Light Effects

Student: Sreeja Balachandran

Light is all around us. From dawn to dusk light is with us in varying intensities – the subtle day break bringing the feeling of life - the fresh morning light - the bright daylight - the harsh afternoon light - the intimate evening light - the cozy twilight - the sensuous moonlight. As light changes from cool early morning to bright white light at noon, to hazy yellow twilight, the way our surroundings appear seem to change too. Light plays a profound effect on the emotions of man. This is an important aspect to be considered while designing the lighting conditions in a particular space. Artificial lights generally tend to be uniform and steady throughout, giving a monotonous feeling. Today artificial lights are being designed to closely simulate the ambience of natural light. This special project is a part of an extensive research on lighting, where the focus is to understand the qualities of natural and artificial light, the effect of light on human emotions and how, with the use of different type of light sources and different materials, the artificial lighting can be made more active and effective to give

the same richness as the natural light.

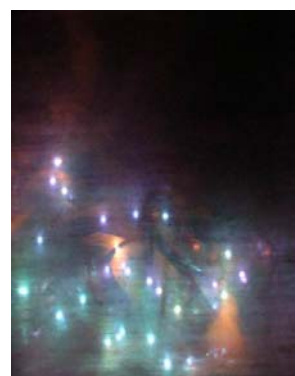


Figure 3: Light Effects: Light Filtering Through Foliage, Student: Sreeja Balachandran



Figure 4: Concept Interactive Lamp 2007, Suresh Sethi

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Biographical note:

Suresh Sethi began his Industrial design career as designer in Philips India in 1983, after graduating from the national Institute of Design, Ahmedabad. He went to pursue further studies choosing Milan, Italy, and did his Master's from the Domus Academy in 1985. In 1988, he left Philips and set up his own consulting company Circus Design Studio, in Bombay focusing on product design. Various assignments firmly consolidated his position among the successful designers in India. Suresh has been visiting professor and has led many workshops and seminars at top Design Institutes in India. In 2003 Sethi was a tenured professor at the Indian Institute of Technology Bombay. In 2005, Sethi joined Nanyang Technological University as Associate Professor in Art, Design and Media, and is the Associate Chair (Academic) and lead faculty of Product design.