Light Dance
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Abstract
The author discusses the origin and meaning of his Light Dance artwork. The simple approach—placing a source of light on the body and thereby manipulating the illumination of the surrounding space through body movements—alters the viewer’s perception of space and time. Architecture appears malleable as the performer affects the size, shape and speed of light forms that reach from the body to the boundaries of the room. Light, in this perceptual environment, is not a mere transmitter of information between the invariant material surroundings and the eye of the viewer; light is a space-defining extension of the performer’s body that transposes movement expression from the individual body to the shared space. An inversion of subjective and objective “spaces” is realized in the experience of Light Dance wherein the prevailing conceptual hierarchy of light and vision is overcome.

The “Living” Mirror
As a graduate student at MIT in 1987, I developed light projectors that I could mount on my body. I wanted to “extend” my body with light and “move” space around viewers. Training as a gymnast with my identical twin brother included vicarious experiences of movement that dissolved the limits of my body in perception—experiences I wanted to investigate and share through art. The instruments, one mounted on each limb, cast planes of light from my body to the boundaries of the otherwise totally dark room. Using precise body movements, I articulated the illumination of the space around viewers, encompassing them in the “dance.” Movements of the body were transposed by light to the shared physical environment, affecting the viewer’s own bodily perception. Here was a connection between subjective and objective realms and the means of shaping one through the other by application of light.

Light Dance (Figs 1 and 2) is rooted in the visual experience of being an identical twin. The view of one’s identical twin is nearly the view of one’s self. The experience is related, though not equivalent, to seeing a reflection of oneself in a mirror. The identical twin is a “living mirror”; the space-time symmetry of optical reflection unlocks a deeper symmetry, the recognition of one’s self in another individual. Core to the identical-twin experience is a form of perceptual ambiguity: With recognition of one’s self in the other person, the separateness and distance inherent in the perception of the other collapses.

Light Dance illumination is not ambient. The space is not given whole to the viewer. Illumination is applied according to the performer’s vision; perceptual space and time are structured by the concentrations and sweeps of light directed by the expressive body. The visual environment is revealed through the speed, size and purpose of the performer’s body relative to the architectural surround. Light Dance is a “vision” of the body, externalized and collective. The notion of light shifts from information-carrier-stimulus of perception of the objective world to instrument of revelation of the subjective visual experience.

Illumination of the Mind and World
We never see light; we see by way of light. Out of the experiential ground of vision, wherein subject and object are one, visual consciousness emerges in the conceptual distancing of the subject and object of perception.

The experience of light as an objective phenomenon was not won easily. If it appears self-evident that light is a “thing” separate from the interior of conscious experience, it is because of the preceding centuries of experiments and inferences [1]. The construct of objective light is so deeply rooted in the contemporary mind that it is nearly invisible to consciousness. The primary experience of light is not of light at all but of illumination. We never see light but for its interaction with matter: “That which gives everything else visibility and object-hood cannot, in the same way, itself have the character of an object. Light is only seen in what it lets become visible” [2]. Even an experience of pure brightness is not an experience of light but the sensation of overstimulated photoreceptors [3].

The human history of cultivating knowledge of objective light is equally one of suppressing and marginalizing the subjective factor. Today the notion of physical light containing a subjective element is generally dismissed as obsolete, e.g. the ancient Greek emission theory of vision or the twofold light of medieval natural philosophy. But objective light will not be contained within existing concepts. As the concept of objective light expands (e.g. via relativity and quantum theories), the subjective factor appears to be pushed to the edges, encoded in

Fig. 1. Light Dance, MIT, 1988. (© Seth Riskin. Photo © Noah Riskin.)

Fig. 2. Light Dance, MIT, 2014. (© Seth Riskin. Photo © Allan Doyle.)
conceptual contradictions in the nature of light that signal the need for a more nuanced notion of objectivity.

Light exists on both sides of vision. It illuminates the physical world and the mind equally: “Illumination” is not an inner as opposed to an outer occurrence; rather ontic and ontological elucidation [Erhellung] are identical” [4]. Of such illumination, spatial and temporal immediacy is the essential factor. We experience what John Wheeler said of the photon: “Light and influences propagated by light make zero-interval linkages between events near and far” [5].

To see, one must see past light. To apprehend light as an object is to subvert seeing. The object “light” does not exist without the experience of light, and, equally, the experience of light is not conscious without the objectification of light. Complementary approaches to light are reflected in different disciplines—art’s approach is complementary to science’s approach, for example. Disconnection between modes and methods of inquiry diminishes understanding of light, while synthesis promises a more complete consciousness of light and therefore a model beyond the limitations of dualistic thought about light and vision.

Mind and Body
The transmutability of mind and matter is fundamental to artistic perception. The artwork is at once object and metaphor. The art object, or phenomenon, is solid and separate from the viewer and yet transparent to meaning. Art demonstrates externalized thinking and is particularly well suited to the inquiry of light. Light, as the “substrate” of the visual arts, provides an instrument for the study of mind-matter relation in the context of the artistic materialization of meaning. The original metaphor, light, becomes an instrument for revealing the origin and significance of metaphor.

Immediate perception of light leads to theory, and theory of light leads to light’s holism. My concern for bridging prereflective thought about light and light theory is motivated by evidence of their complementarity, i.e. relation within wholeness. My aim as an artist is the deepest possible perception of light. My aim is not artwork; my artwork is the result of experiencing light.

Light Dance Practice-Based Research
What is the foundation for my Light Dance research? Light as a subject of thought has proved impossible to deal with holistically. Light is intrinsic to the furthest levels of physics, philosophy, psychology, etc., and the mental structures required to comprehend light have been quite complex. Yet some of the most advanced concepts of objective light, e.g. quantum entanglement, wave-particle duality, etc., embody semantic and conceptual contradictions that indicate the limits of scientific objectivity and therefore suggest a subjective element.

Historically, light stimulates intellectual illumination insight as well as vision of the exterior world. Light is as important to mystical experience as it is to physical theory. Reduction of one to the other leads to category-error absurdities. The lesson of all relevant fields of knowledge is that light remains at once concept and experience; separating these diminishes apprehension of light.

Paradoxes generated by one way of thinking can be instruments for others. The struggle to know the origin of light has both fueled the advance of knowledge and thwarted it. Perhaps it is more accurate to say that light was never on one side of the subject-object divide—it is on both; there is no divide. The challenge is not answering whether light is of the mind or of the world but dissolving the problem by developing method and knowledge inclusive of the totality of light as we experience it.

Light Dance presents a method for probing light at the intersection of human interior and exterior experiences. It treats “inner light” and physical light as one in communal revelation. Light Dance reflects ancient, preconceptual knowledge of light as well as it does the limits of contemporary theory. Theoretical and perceptual structures of light, i.e. semantics and architectonics, interrelate, realizing the “physical semantics” of light. The centralized, scaled, spatiotemporal transformations of solitary visual experience are exteriorized. Light and vision appear coemergent and invertible; light is equal to preconceptual vision, and vision prefigures light.

Conclusion
Light in immediate perception and light in concept are poles apart, each implicating matter, space and time differently. In the immediate experience of light, illumination of the mind and physical illumination are not separate. The unified experience of inner and outer is characteristic of prereflective thought, especially concerning light. In the words of Étienne Bonnot de Condillac: “The first time we see light . . . we are it rather than see it” [6]. Vestiges of prereflective encounters with light (religious symbols, expressions of early childhood, artworks) reflect the co-equivalence of light and consciousness. On the other hand, physical light in contemporary conception is largely distinct from matter, space, time and consciousness. Light Dance seeks to unite these poles of light experience within a sphere of knowledge and method that reflects mind-body continuity.

References

Bibliography