Grounding Practice: Speculations on Affect and Environment

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Setting the stage

While lighting design has finally evolved into a legitimate, recognized field of practice, its evolution as a field of study is lagging behind. There is as yet no cannon: no body of principles accepted as axiomatic or universally binding in our field of study. Nor do we have a comprehensive list of texts deemed relevant to our field. There is practice, lots of practice. Some practitioners have taken the time to document and present their work to the benefit of our and neighboring fields. However, we do not, as yet, have the tools for transforming the lessons learned from individuals' lighting practice into a formal knowledge base. We are still in the early stages of building a conceptual framework and models of discourse that can contribute to the development of a rich and nuanced cannon.

Scholarly volumes and popular texts that address issues relevant to lighting design are rarely written by lighting designers. William Lam is a notable exception.[1] But Tanizaki is a novelist; Wolfgang Schivelbusch and David Nye are social historians; Henry Plummer is a philosopher and poet, as is Gaston Bachelard.

In a field that has only recently succeeded in identifying itself as a viable discipline, the lack of a conceptual framework is understandable. Until very lately there has been little support for scholarship in the field. The economics of consulting make it extraordinarily difficult for designers to find the time or resources to conduct post-installation evaluations, or to frame their results in a way that might form the basis for such a cannon. That said, some areas have been covered extensively. Studies on daylight and the role of windows, investigations into views and colors, as well as research into the positive and negative effects of light on health, have all produced a credible and growing body of literature.

However, in the arena of nighttime public lighting the situation is more complex. An increasing number of essays speak to the aesthetic, psychological, social and economic benefits of lighting in urban social life. At the same time, ironically, there is a profound awakening—among eco-biologists, astronomers, urban planners, economists, journalists and lighting designers themselves—to the destructive impact of using too much electricity and the detrimental (some would say devastating) effects of the over-use of light. Darkness is now described as "an endangered natural resource." Public lighting is destroying species' habitats, and certain species—those who cannot adapt—are perishing. There is persuasive evidence that this problem cannot be solved by replacing one technology with another more efficient technology[2] or by redesigning the

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[1] William M.C. Lam, <u>Perception and Lighting as Formgivers for Architecture</u> (New York: Van Nostrand Reinhold, 1992).

[2] David Owen, "The Efficency Dilemma" (<u>The New Yorker</u>, December 20 & 27th, 2010) and William D. Nordhaus, "Do Real-Output and Real-Wage Measures Capture Reality? The History of Lighting Suggests Not" (New Haven: Cowles Foundation for Research in Economics at Yale University).

instruments that provide light.[3] Legislation governing energy use and lamp sources is evolving. But the installation of public lighting—municipally-supplied street lamps, new high-output LED signage, and lighting spectacles and art installations of every variety—is on the increase globally; its magnitude and scale is only now becoming appreciated.

I do not believe that making across-the-board draconian cuts in public lighting is the answer. What we need are nuanced and thoughtful solutions to an exceedingly multifaceted problem. The danger is that the search for greater efficacy obscures the need for a principled rethinking of the direction of development. In our current situation, the search for relevant scholarship and ways to make lessons learned into teachable principles takes on a particular urgency.

As we are establishing the benefit of our practice, we are (justifiably) being asked, and asking ourselves, to reconsider some of our most basic assumptions. It is a moment to take a breath, to step back and make a conscious and deliberate effort to understand at a fine-grained level the benefits and drawbacks of adding (or subtracting) light to the nighttime urban environment. To do so we need to: (1) reveal the conceptual frameworks we are currently operating with (unconsciously or otherwise); and (2) consider conceptual frameworks from other disciplines. We especially need to look at candidates that offer methods for studying how humans and other species interact with light in real world settings, so that our practice can give shape to our theory.

Learning from Environmental Psychology

I propose that environmental psychology has a great deal to offer for such a fundamental review of our existing assumptions and the development of theories that support us to address today's challenges. It has a sizable body of research literature and a number of rich theoretical positions and constructs. Here are some reasons for this choice:

> Environmental psychology is not a deterministic or behavioral discipline. Unlike many architectural theories, it does not assume that if you change a physical structure or environment, you will determine behavior. On its account, humans are not passively reacting to external conditions, but are goal-directed beings who act upon their environment and are, in turn, changed by it. If we accept such a "transactional" analysis, we can see that adding light to the nighttime environment is not simply "dialing up an existing property" that results in a new set of behaviors—i.e., people go out more at night, they meet socially in a public space, and so on. Rather we are restructuring our physiologies, psychologies, expectations and values and, by the way, creating new cultures of public space. We cannot step back from the dialectical relationship between humans and their environment. Nor can we legislate against consequences we cannot foresee or enforce change in a specific direction. We can, however, consciously exploit the possibilities and look for emergent relationships.

> Environmental psychology recognizes and embraces complexity: biological, psychological, social complexity, and the intermixing of these domains. It studies basic psychological processes within the context of social processes, values, attitudes and cultural norms—all of which shape our basic perceptions of the world, linking individual dispositions and social actuality. This is essential if we are to understand and respect that the needs and desires of different global communities not as "givens,"

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[3] Catherine Rich and Travis Longcore, <u>Ecological Consequences of Artificial Night Lighting</u> (Washington D.C.: Island Press, 2006).

but shaped by diverse value systems and histories. We have to understand lighting needs from <u>inside</u> the community—whether it is a question of utility, psycho-social value or economics. For example, some US cities have begun turning off public lighting to save money or to ramp down public services in areas less uninhabited due to wholesale housing foreclosures. This cuts down on electrical usage and protects the night sky for sure, but at what social/psychological cost? But in developing countries, we see just the opposite trend. Societies that have been forcibly kept in the dark now demand their right to live a 24-hour life.

Environmental psychology studies human beings in their everyday setting, not under artificial conditions in the laboratory. It offers methods for investigating real-world situations, studying the effects of interventions and changes, and constructing models that utilize the findings.

Environmental psychology is multidisciplinary in its origins, bringing together aspects of a number of scholarly fields, including sociology, anthropology, urban design, geography and architecture. It offers an abundant pool of ideas from which to draw when constructing a lighting design cannon.

Some selected environmental psychological principles for consideration:

1. An environment has psychological as well as physical properties.
2. Our physical environment is embedded in and intricately tied to our social system. We cannot respond to an environment independent of our role as social being.
3. The degree of influence of the physical environment on behavior varies with the behavior in question. The more complex the environment, the less likely it is that any one dimension of a physical environment will play a major role influencing behavior.
4. The environment frequently operates below our awareness, and, for the most part, we take it for granted. We become most aware of our environment the moment it changes, because at that point we begin to consciously adapt to the new environment.
5. The observed environment is not necessarily the "real" environment. We perceive the environment through the lens of our expectations, desires, frustrations and whims. These "points of view" may be more important in modifying our actions than the physical properties of the environment.
6. The environment has symbolic properties. What an environment means to us may be distinct from its value or function.

Conclusion

Today's lighting designers have the historic chance to develop a more reflective and ecologically responsible way of using light. I suggest that we approach these challenging times as an opportunity to perfect our understanding, rather than as a threat to our creative freedom. Such a road commits us to a more theoretical stance, a search for general principles and more systemic scholarship. We may also find that developing a conceptual frame for our work is important to sustaining our own profession, one which I believe is more essential than ever.