

aia VT

a r c h i t e c t u r e i n t h e g r e e n m o u n t a i n s



9.03

calendar

october 23:

Efficiency Vermont Program
at Northern Power in Waitsfield,
6:00p.m. 2 HSW LU's will be credited.
Finger food buffet will be provided
by Efficiency Vermont.
Wine & beer will be available for a suggested donation.
October 31st: Design Award entries due at Chapter
Office by 5:00p.m.

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congratulations

Frank Guillot was elected First Vice President/President-
Elect of NCARB at the NCARB Annual Meeting last
week in San Antonio!

"Not a total surprise, since I was unopposed,
but it is still pretty exciting to realize that it
really happened. Should be an interesting
and busy next few years."

*Systems can have a highly architectural content.....
the systems concept can be interpreted so widely as to
range from the classical orders to plumbing.....*

*The purpose may vary from the aesthetic and symbolic to
the purely practical, but the mechanism is the same:
Certain parties agree to work with certain parts in certain
relations.....*

*....systems live in a social body.....develop, change,
and bloom through use.*

*Today's world is multiform. The range of environmental
systems has extended. In their professional life, students
will be exposed to a host of systems, both technical and
architectural, material and spatial....*

Architectural education therefore should sustain a consistent
and comprehensive inquiry in the thematic properties of
systems in the built environment....

These properties must also structure the way we devise
exercises for students to develop systemic skills. The fact
that one enters a social convention as well as a physical
system must be recognized.

n. john habraken

*"Tools of the Trade,
Thematic Aspects of Designing"*

*from draft report, 1996; An unpublished paper on the
education of architects.*

architectural research online donna j. leban, aia, lc

I hope you had a chance to read the new AIA Journal of Architecture/Spring 2003, which outlined some of the current research in architectural design. If you didn't, you can still view and download a copy at www.aia.org/aiajournal/AIAJfinal.pdf. The publication focused on the AIA effort to sponsor research at the Salk Institute in San Diego on how the brain experiences architecture, and whether good design could have a beneficial effect on human longevity, health, and productivity. In addition to discussion of the architecture/cognitive psychology connection, the article contained a review of workplace productivity research at the U.S. General Services Administration (GSA) and Carnegie-Mellon University's Center for Building Performance Diagnostics- my alma mater.

If your reaction was anything like mine, I found a lot to get excited about. Just think, finding ways to prove to clients that good architecture matters. What a concept!

Before long, however, I started to think of a number of other architecture/building science related organizations that also publish and disseminate research findings. Is this highly relevant information common knowledge to practicing architects and engineering/design consultants? Are architects taking advantage of this body of knowledge to bring

better value to their clients? Are specialists who have more extensive knowledge of scientific research being adequately utilized by architects and their clients to create better, more responsive design?

While the AIA Journal did survey architects about their involvement in and use of research findings, this article has a much more modest goal. It is intended as a bridge to web sites that can provide assistance to architects hoping to learn more about research and recommendations related to their practice.

The bulk of current building related research considers the direct effect of building environments on human health, welfare, and comfort. That's what makes AIA efforts to identify spatial benefits rather intriguing.

Due to government efforts to wean us from excessive use of energy, energy efficient building design and technologies have received a significant amount of government research dollars over the years. Government building projects have also provided good case studies. Sites to check out include the U.S. Environmental Protection Agency's Energy Star Programs, www.energystar.gov; and the U.S. DOE Energy Efficiency and Renewable Energy site, www.eren.doe.gov. These sites are portals to a real wealth of information. Pacific Gas & Electric, a major utility company in California, www.pge.com, has also invested heavily in research and development of computer software to assist architects in building more energy efficiently. Most of this information is available for free, but may require adaptation for northeastern climates.

One of the most important new bodies of research to arise in the last decade includes indoor air quality, and the effects of chemical and biologically harmful bi-products of buildings, as well as radon. Architects and builders have a critical need to understand the physics behind envelope design for prevention of moisture entrapment leading to harmful mold and mildew. Environmental Building News www.BuildingGreen.com is a valuable source for detailed, technical information and reviews of specific products. Most resources are available by subscription through this private company, located here in Brattleboro, VT. The Indoor Air Quality Association, at www.iaqa.org, is a source for information on mold remediation and other IAQ topics. The Indoor Air Quality Research Program at the California Air Resources Board, at www.arb.ca.gov/research/indoor/htm, is an easy to read site with good information on source pollutants in residential buildings. The Dept of Energy's Indoor Air Quality Research and Development web site, at www.eere.energy.gov/buildings/research/indoorairquality.cfm, gives good qualitative information about ventilation strategies and source reduction of VOC's (volatile organic compounds).

Of all the environmental sensory factors in architecture, none have a greater interest to architects than the visual effect of light. We are all affected by the quality and nature of light, without which we would have no visual perception of spatial volumes and depth, textures, colors, and contrast. Human perception- the subject of cognitive psychology- is clearly at the root of lighting research. Our visual perceptions- ie, the combination of what we see and what our brain does with the information, has a direct impact on our mood, productivity, privacy, relaxation, and safety.

There is a growing body of knowledge on the human response to various types of light and visual patterns, available through the Illuminating Engineering Society of North America (IESNA). Their web site, www.IESNA.org, is a portal to a significant body of information, including research published quarterly in the Journal of the Illuminating Engineering Society. Topics of architectural interest range widely from standards for various facility types to psychological pro-

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cesses influencing light quality. The Lighting Research Center at Rensselaer Polytechnic Institute www.lrc.rpi.edu has also done significant research in topics ranging from lighting for older adults to advanced lighting technology applications. While their site is less research oriented, the Designlights Consortium, consisting of a group of Northeastern Utilities, publishes their knowhowTM Series online, with guidelines for quality lighting of common types of facilities at www.designlights.com.

The qualities of natural daylight have long been appreciated by architects. Research by an architectural firm, the Heshong-Mehone Group, for Pacific Gas & Electric has shed more light on the decidedly positive human response to daylight in both schools and retail space. www.h-m-g.com. Because the school study was designed to meet rigorous scientific standards and has been widely distributed by electric utility companies to encourage the use of daylighting for energy savings, many school administrators now ask for good daylighting design in new schools. This is clearly a case of good science encouraging good design.

Most architects don't have the time to delve into research in building science, indoor air quality, sustainable design, and ergonomic lighting. This has led to the increasing importance of specialists in these fields. Working with a building science or lighting specialist is an effective way of adding value to your design services. Also, there are many continuing education opportunities available for specialized learning. Besides local programming and the AIA Annual Conference, check out sites specializing in on-line training courses, such as www.redvector.com.

Donna J. Leban, AIA, LC works with architects and engineers as a certified lighting and sustainable design consultant through her firm, Light Space/Design. She has just created an on-line course for designers through www.redvector.com entitled Essential Lighting- the Language Metrics, and Process of Lighting Design.

The firm's new educational web site is at www.lightspacedesign.biz. Please check them out.



Our October issue will be the last of our printed-and-mailed newsletters.

Beginning with the November issue, as promised (or warned) we will be emailing a link to our pdf version on the web site. By clicking on the link or copying it into your web browser, you will open the newsletter in Adobe Acrobat and be able to read it, copy it to your computer or print it.

We will continue to also have the main story on the Newsletter web page. Some of the other information previously in the newsletter will be found on the web site. The Board of Directors and Events Calendar are the first two that come to mind.

As mentioned previously, if you have questions about this change, contact Steven Clark at:

sclarkj@adelphia.net
or 1-802-496-3900.

We will have a few tips included on using Acrobat and a link to download it with the email notice of each issue.

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