Booklist and Reader’s Advisory, August 2023

Recently published architectural books and related works, selected by Barbara Opar, Librarian for Architecture, Syracuse University Libraries. Barbara can be reached at baopar@syr.edu.

Reader’s Advisory

**Are Architecture Firms the Next Design Thinking and Innovation Giants?**

**Designing With Users: 7 Projects Where Architects Collaborated With Communities**

**House Plans Under 100 Square Meters: 30 Useful Examples**

**Le Corbusier’s Color Theory: Embracing Polychromy in Architecture**

**Immersive Art Exhibitions Offer Lessons for Architecture and Design**

**Why Landscape Architecture Matters Now More Than Ever**

**Articles and Segments**— Yun Jiang is back home in China for the summer, so I am trying something a little different. Many of you may also be away from physical issues of current architecture journals. Instead, topics of current interest are being explored in a more in-depth way through links to open access articles, blog posts, etc. Information on this month’s topic has again been prepared by Pisey Kim, a library student assistant and rising third-year architecture student here at Syracuse University.
Greetings, my name is Pisey Kim. I am a rising junior architecture student. I also work as a library assistant at the King+ King Library. This month, I chose articles, research, journals, blogs, and news regarding the scheduled theme of new directions in sustainable design. I hope you enjoy reading these selections as much as I did assembling the list. Thank you.

Theme: New Sustainability Strategy in Design

Media:

- Arch daily:

Time Space Existence 2023 Envisions New Sustainable Ways Forward

Highlighting the current exhibition of 2023 Venice Biennale, where new visions for sustainable design are introduced. Dense urban living was thought to be solved by new ideas like vertical movement between skylines, and utopianism was also thought to have a similar impact.

Adaptive Reuse: Rethinking Carbon, Sustainability and Social Justice

When compared to new materials, recycled materials help reduce the environmental impact of carbon. This article provides some examples of CO Adaptive Architecture’s sustainable practices, such as finding new uses for old buildings in order to avoid structure destruction.

- Rethinking the Future

What the Future Holds for Architects

The article highlights the idea of using technology to plan the future, where predictions focus on current trends such as the goal of sustainable design, smart cities, and energy efficiency. The objective is to expand planning considering to be more comprehensive, centering on community, nature, and co-existence.

- Smart Building

What is a Smart Building?
Even though the terms "intelligent building" and "smart building" are ambiguous, this document aims to distinguish between the two and argue that "smart building" focuses on more advanced technologies that can be applied to non-residential buildings.

**Smart Building Integration into a Smart City (SBISC): Development of a New Evaluation Framework**

The purpose of this paper is to examine the characteristics of smart buildings before they are integrated into smart cities. Smart cities emphasize smart economy, smart people, and smart living; thus, smart buildings must adapt to these qualifications through the use of smart materials, smart building services, and smart construction to serve the surrounding environment.

**Design and Implementation of Smart Buildings: A Review of Current Research Trend**

This Department of Energy document examines existing articles to investigate improvements in building energy and technical systems for smart home and building applications.

- **Adaptive Reuse:**

  **A Framework for Sustainable Adaptive Reuse: Understanding Vacancy and Underuse in Existing Urban Buildings.**

  Due to unforeseen events such as the pandemics, building vacancies and underutilization have increased. Written as an academic review, the purpose of this work is to reexamine the concept of reuse of uninhabited buildings and to propose its application in urban policy, for example, the conversion of vacant rooms into stock.

  **Adaptive Reuse as an Approach to Sustainability**

  This essay highlights the critical impact that adaptive reuse has on the long-term sustainability of historic structures. One of them is concerned with maintaining the uniqueness of architectural heritages. The paper develops a synthesis definition of adaptive reuse as adjusting to the needs of contemporary use and increasing the life cycle of the building to raise the value of architectural heritage.
Adaptive Reuse as Sustainable Architecture in Contemporary Shanghai

While the idea behind adaptive reuse is to include new functionality while maintaining a building's historic qualities, this study asserts that in Shanghai, adaptive reuse may mean destroying traditional features and cultural traits in favor of an invention that is more in line with the times.

• **Green Roofs and Living Wall:**

The Role of Green Roofs and Living Walls as WSUD Approaches in a Dry Climate

Green roofs and Living Walls are thought to ease building temperature issues. However, there is no specified technological approach to how it operates. Furthermore, the design differed depending on the climate. As a result, the focus of this paper was on understanding and developing a strategy that could be applied in a broader context. This then led them to discover a solution that worked by altering the water system.

Green Roofs and Living Walls

This research discusses the efficient strategy, which they named the "secretive method to the green design," focuses on the longevity of the plants, as required by new regulations to incorporate green roofs and green walls in new design buildings. This prompted them to point to a few significant plants that could adapt in the context of the green roof.

Green Roofs and Green Walls for Biodiversity Conservation: A Contribution to Urban Connectivity?

This paper addresses the issue of green roof isolation, arguing that the integration of vertical structure should be used to connect wildlife to green roofs in urban environments. It also informs us about the inefficiency of green wall corridors that separate urban life from the city.

• **Net-Zero Energy Buildings:**

What is a Zero Net Energy Building?

Retrofitting an Office Building Towards a Net Zero Energy Building

In parallel to the European policy to reduce energy consumption in buildings and increase the use of renewable energy sources, the paper presents a case study of energy consumption reduction at the Technical University in Crete and the application of renewable energy technologies that the consequences were based on energy conservation principles but were sufficiently efficient to reach net zero energy.


This paper provides an analysis of various studies relevant to the issue of global climate change, with a particular focus on the building sector. It seeks to integrate the current technological applications of net-zero energy building and outline the future directions that have been suggested by researchers and policy-makers.

Design Issues for Net Zero-Energy Buildings

Europe has made using renewable energy a policy. Although having net-zero energy buildings is the ultimate aim, the definition and implementation techniques are yet undefined and underdeveloped. With regard to the concept of solar installations on residential structures, the author of this study shares insights from continuing research on NZEBs.

- Water Conservation Strategies:

Architectural Strategies and Systems for Conserving Water

The purpose of the article is to discuss the significance of using architectural systems, such as creating a system for collecting rainfall and recycling greywater, to conserve precious water resources. A landscape can also be created by installing small irrigation systems for plants.

Water Conservation and Architecture

This article acknowledges that conserving water may help reduce the effects of climate change, improve energy efficiency, promote green building, and sustainable development. It describes technical water conservation applications in building design, including how water is measured, installed, and the case study
presented related to Australia.

- **Low-Impact Materials:**

  **Low-impact building - introduction**

  Low-impact materials have the least negative effect on the environment at all phases of production and transportation. Most are biodegradable and natural. This article covers low impact materials and offers guidance on how buildings could be built in relation to the site, their scale, and the available energy sources.

  **Masonry in the Context of Sustainable Buildings: A Review of the Brick Role in Architecture**

  The paper seeks to perform a historical overview of masonry from its use in prehistoric times to the present in an effort to demonstrate that it is the most obvious and appropriate material for sustainable development. This is done as a contribution to the research on sustainable construction materials.

- **Passive Design:**

  **What is the Meaning of Passive Design?**

  The trend of Passive Design has been neglected. The purpose of the article is to review the terminology and components of passive design. They go on to describe the building science principles underlying passive design.

  **What are Passive Design Strategies & Their Importance in architecture - 2023**

  The purpose of the article is to define passive design and present critical strategies that architects should take into consideration. Passive design is thought to not only provide energy efficiency, but also all the comfort that enhances human well-being and the longevity of the structure, thereby approaching sustainability.

  **ZEMCH: Toward the Delivery of Zero Energy Mass Custom Homes**

  This is a recommendation to use microclimate while implementing passive design principles in early stages of design, such as site analysis. As a result, climatic classification is required. Passive design can be used to its greatest capacity by including solar systems, biophilic design, and earth sheltering. According to the
• **Circular Design:**

*How to design a building on Circular Economy principles*

A case study from the UK setting, Designing in Circular Economy, begins the design concept using available and economically local materials, including reuse and refurbishment considerations. This method is also thought to reduce building waste while developing a natural system.

**IOP Conference Series: Earth and Environmental Science**

The objective of this study is to explain the various types of building waste that can be reused in architecture. The paper also discusses the impact reused materials might have on the environment and social perception.

• **Resilient Design:**

*Resilient Design: Why It’s Important to Architects*

Learning from California’s natural disaster cases, the article attempts to raise awareness of the importance of resilient design in reducing risk, primarily by assessing the economic value of a more sustainable building.

**An Ecology for Cities: A Transformational Nexus of Design and Ecology to Advance Climate Change Resilience and Urban Sustainability**

This paper focuses on the key elements to make sustainability in urban design a reality by understanding how urban design practice relates to ecological science. It also discusses how urban design and infrastructure can help cities to be more resilient to climate change, which is a must-have to improve eco-design for cities. Finally, it includes a few case studies to show how the efficiency model works.

**More Articles:**

*Sustainable Architecture—What’s Next?*

Sustainable growth requires more than just a focus on green architecture, low carbon emission design, and energy efficiency. After the Rio Conferences announced their new definition of sustainable development, even vernacular
buildings that were earlier considered to be the most sustainable buildings must be reevaluated. Rational land use, material, energy efficiency, location, effective planning, economics, and recyclability are the main themes of new sustainable development. The paper also touches on the question of whether more integration could be necessary to ensure sustainable growth.

**Booklist:**

**Topical—Diversity, Equity and Inclusion**


**The Subject is Architecture**

**Architects**


**Architecture, Ancient**

Henig, Martin. *Villas, Sanctuaries and Settlement in the Romano-British Countryside: New Perspectives and Controversies (Archaeopress Roman*

Architectural Modern


Architecture – Iran


Architecture – Spain


Architecture – United States


Architectural Design


Hvattum, Mari. Style and Solitude: The History of an Architectural Problem.


**Architectural Drawing**


**Architectural Photography**


**Architectural Practice**


**Architecture and Society**


**Building Materials**


**Building Types**


**Historic Preservation**

Landscape Architecture


Masterworks


Reference


Sustainability


Urban Design


