BOOK REVIEW:
PRELIMINARY REFLECTIONS ON ENHANCING BUILDING PEFROMANCE

Edited by Shauna Mallory-Hill, Wolfgang F. E. Preiser, and Chris Watson

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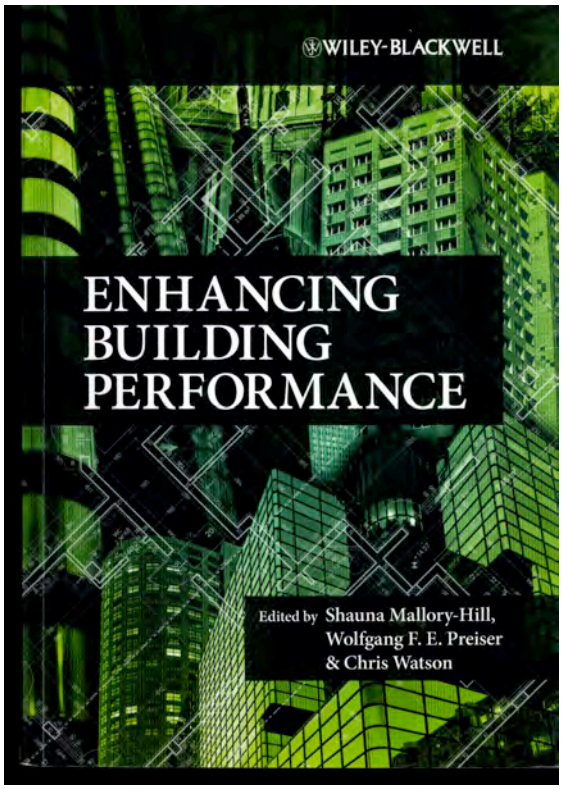

This 2012 book is a new addition in the field of Building Performance Evaluation (BPE). This contribution consists of 26 chapters in six parts, edited by Shauna Mallory-Hill, Wolfgang F. E. Preiser, and Chris Watson, three editors with various professional backgrounds and intensive experience in the field. Shauna Mallory-Hill is an assistant professor in the Faculty of Architecture at the University of Manitoba with a wide research and teaching experience in the field of building performance evaluation. Wolfgang Preiser is a professor emeritus in the School of Architecture and Interior Design at the University of Cincinnati. Preiser holds a strong record of books and publications in the field of building analysis and post operations evaluation. Christopher Watson presents the practical experiences and adds a great value to fill the crucial gap between academics, researchers and practitioners. Many contributors come from different part of the world and offering their experience in enhancing the performance of buildings and environments on their contexts. This review highlights key features of these contributions.

Keywords: POE-post occupancy evaluation; research; professional practice; enhancing building performance.

REVIEW

The book capitalizes on developing the evaluation of building performance methodologies and cases. *'Enhancing Building Performance'* is a natural and logical development of the widely known earlier book *'Assessing Building Performance'* by Wolfgang Preiser and Jacqueline Vischer. However, this contribution is far-reaching; it stretches the philosophies of building evaluation, to present newfangled notions in initial planning, programming and Post-Occupancy Evaluation (POE). It consists of several international experiences and case studies with practical approaches and underpinning theories, focusing on evidence-based and integrative design processes, evaluation methods and tools, education, and knowledge transfer. The diverse number of case studies reveals the numerous qualities and challenges of evaluating buildings. This book targets primarily the practitioners of planning and architectural design, as it serves them best by the extensive information and outlining the assessment performance models and investigations into buildings. Nevertheless, it is indeed useful for researchers and consultants in the fields of architecture, building assessment, and facility management and this due to the fact that the book involves updated methodologies applied in assessing different building typologies worldwide. However, these are not the only intended readers, business cooperates, and decision makers will likewise benefit from the ideas of sustaining the best performance of the business cycle.

The book is designed in six parts, each of which has a specific focus-- all centered on the notion of Building Performance Evaluation. In the first part, consisting of two chapters, co-authored by the editors, and addresses the reader with a detailed insight of how BPE has evolved for the last 50 years. The chapter defines different aspects and parameters for enhancing building performance and a series of advantages that linked to the importance of research relevant to the users and their surrounding built environment. The chapter then explores the emergence of Post Occupancy Evaluation and theories that backed up this field of applied research during the late 1970's. Later, how POE evolved during the 90's till 2005, to bring out to light the concepts of Building Performance Evaluation and the crucial need for this capacity to generate more elaborative ideas of design control based on evaluative measures. Yet, the authors declared the crucial need to develop BPE for increasing the desired expectation of users and decision makers toward the environments they use and make decisions about. The chapter highlights the role of stakeholders in the assessment process and their collaborative activities to deliver objective and valid findings. Another quality is that the chapter stresses the need for extraordinary interdisciplinary research within the BPE to address the complexities between the users and their environment. Then, the authors concluded with a set of benefits that may foster the life cycle of buildings.

In chapter 2, co-authored by Wolfgang Preiser and Ulrich Schramm, they discuss the performance evaluation paradigm throughout the building life cycle. They present the process model of BPE, its evolution from various methods and cases. The study describes BPE in different phases of the building cycle, such as, a. Strategic Planning, b. Programming, c. Design, d. Construction, e. Occupancy, and f. Adaptive Reuse/Recycling. The authors take this informative chapter with an additional layer for elucidating the means of performance within different phases. They also present the required criteria to conduct the assessment while covering the literature on the effect of other sociopolitical, historical, and economic levels.

A critical insight of BPE design processes and evaluation is the main theme of the second part; it discusses several aspects of participation and feedback by the various stakeholders. The significant objective of this part is to identify vital best practices and methods to improve the performance of buildings. This part consists of 4 chapters, starts with Rodney MacDonald and Sonja Persram discussing the '*The Integrative Design Process' (IDP)* in the phases of programming and developing design strategies. The chapter covers the origins, evolution and definitions of IDP to express later how other scholars and practitioners moved forward into more

details within sustainable architecture. The main idea is to investigate the engagement possibilities of primary clients toward sustainable buildings.

The second chapter is a must read, authored by Henry Sanoff. He explicitly investigates the aspects of collaborative and participatory design process. Sanoff sums up the concept of Community Participation in the design process and its evolution since the 70's. Sanoff offers several examples that range in scale from the architectural and urban, offering a wider range of interests. The following chapter is *'Enhancing Design Programming: The Case of Detroit Collaborative Design Center and Detroit Hispanic Development Corporation'* by Sheri Blake is a step forward into collaborative design process, yet with a practical essence, it presents the advantages of workshops and detailed sessions between various stakeholders. The final chapter of Part 2 is by Chris Watson, focusing on Post Occupancy Evaluation with a theoretical brief and background. He discusses methods applied throughout New Zealand, Australia and Europe; in addition, how stakeholder utilized these techniques in refining new buildings to increase performance expectations. Watson highlights the success of POE even more on development schemes of heritage buildings.

In part three, there are 7 chapters, mostly investigating BPE in action, and they provide a wide understanding of BPE utilization in various architectural and urban typologies. What makes this part stands out from others is its multi-national and cross-cultural dimension; it includes cases from Italy, Japan, USA, Qatar, and other successful cases. Yet, there are two chapters that may have a different taste, the first by Ashraf M. Salama where he focuses on higher education teaching environments. He investigates initial vision of decision makers and architects toward the development of Qatar University's Campus against current experiences and feedback by various users. Salama introduced the use of behavioral mapping and walkthrough impressionistic assessment toward evaluating key outdoor spaces of the campus. The chapter presents major key findings into wide graphical illustrations to simplify research process and outcome. The second chapter by Carlotta Fontana from Italy is also of note. In this chapter, she investigates the performance of built heritage adaptive reuse in Milan. She focuses on the local communities' feedback and perception toward architectural values. She presents two case studies with large students' densities to assess their acceptance and perception of the technical and functional requirements in buildings. The second section of this chapter, she once more utilizes performance-based analysis on landscape environments in Milan. Her investigations highlight the essentiality to develop the public understanding and awareness of heritage preservation and the values of current natural and built environments to empower local communities in decision-making processes.

The fourth part focuses on the Research Methods and Tools, again it consists of 7 chapters, however these contributions target methods and techniques introduced to evaluate the performance of the built environment. As a matter of fact, it diversifies the approaches followed with an international essence, the cases likewise in part three present several countries and regions. These methodological approaches start by users' perceptions testing, occupant surveys, and experiences exploitation. On the other hand, it serves mostly researchers and students due the large number of data collection methods, criteria determination and selection, and the successful integrative methodological process design for several types of research work including exploratory, investigative, and applied. Some of the chapters focus on assessing the performance of work environments and others place emphasis on technical aspects relevant to green architecture. Chapters 14 and 18 focus on developing the well being of working environments and the potentialities of developing an effective decision-making process. The fourth part adds another major layer, with a major focus on the use of digitized and computation techniques to assess the building performance. In chapters 15 and 19, by Preiser & Wang and Jan Hensen respectively stress on the optimization of computing system that may aid in measuring quantitative values of performance tests. In addition, Wolfgang and Wang utilized the methods of Geographic Information Systems (GIS) to draw a relationship between various scores for several branchs of a public library system in Cincinnati. On the other hand, Hensen presented scores of a

computational simulation of indoor spaces in the building cycle and the various outcomes of performance investigation. Ultimately, both are exceptional approaches that may need attention for future research possibilities. In the last chapter of this part, Clintoc Andrews, Jennifer Senick and Richard Wener present *'Incorporating Occupant Perceptions and Behavior into Building Information Management (BIM).'* The authors discuss the notion that human perceptions and behavior may affect investigation into the building performance. Thus, Andrews *et al.* proposes a computer simulation framework based on previous POE results of green commercial office buildings. Another chapter with and extra unordinary methodological tools of drawing future results for higher performance rates in public buildings based on previous best practices.

Education, is the main theme of the fifth part of the book, and contains 5 chapters. The first chapter examines POE in Brazil, how and when it evolved among the research and academic community till it reached professional practice. The authors examined the effect of POE on various building typologies and on directing designers into the design process with more qualities exploited by the investigations. The authors even stressed that POE requires more attention within the undergraduate studies to inject within young designers the potential aspects of evaluation-led enhancements. Later, Schramm had an experience of how to utilize BPE into the construction Project Management curriculum. Schramm believes that evaluation should be introduced in the construction phase to work on cost-effective buildings of better quality. Again, Ashraf Salama presents another contribution based on his extensive experience in architectural education. He focuses on Inquiry Based Learning (IBL) through evaluation research in the process of education. Salama challenges the traditional techniques of teaching students, by how to produce valid observations and future possibilities through primary cases and best practices. Finally, the book ends with a brief epilogue by Francis Duffy, who discusses the term, the essential need for building evaluations during this era, in order to reposition the built environment with more appropriate and sustainable trends for future generations.

Enhancing Building Performance is a must read contribution by and for many who are obligated to foster the performance of buildings and environments in their contexts. Architects, planners, academics and other professionals involved in the building industry would find this book an excellent reading. Educators, undergraduate and graduate students in architecture and related fields would find the approaches, tools, and techniques utilized in the cases presented of great benefit to their current and future research work.

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