

Institut Teknologi Sepuluh Nopember Surabaya

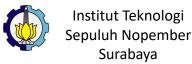
FORMULATING EMPIRICAL INDICATORS IN SUSTAINABLE ARCHITECTURAL AESTHETIC RESEARCH BASED ON THE AESTHETIC CONCEPT OF JON LANG AND WALTER MOLESKI

Mulyadi (mulyadiuns@gmail.com), V T Noerwasito, I G N Antaryama



International Symposium and Workshop on Sustainable Buildings, Cities, and Communities "Building Low Carbon Future: Decarbonizing with Impact"





Introduction

- Research on sustainable architectural aesthetics is still in its early stages[1].
- Artistic aspects in architecture are still difficult to research and still in the phase of historical and philosophical reflection [2]
- This study aims to develop sustainable architectural aesthetics by formulating empirical indicators for a more comprehensive aesthetic research.





Literature Review

Sustainable architectural aesthetics publication in last decade:

- Smart skin with a case study method and the application of AHP (Analytic Hierarchy Process) [3]
- Relationship between the sustainable architecture movement, its labels, and the implications [4]
- Aesthetic interpretation of landscapes [5]
- Aesthetic, functional, and environmental efficiency of urban space [6]
- Visual pollution[7]







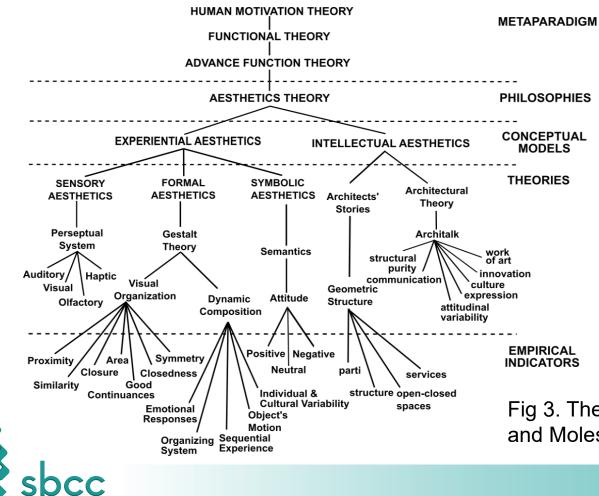
Method

- The object of the study: the aesthetic concepts in chapter 14 of the book titled "Functionalism Revisited" by Jon Lang and Walter Moleski [9].
- The method is arranged in 2 steps:
 - 1. Content analysis
 - 2. Level of abstraction [10]





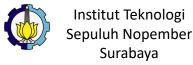
Result and Discussion



The Application of Level of Abstraction

- Human Motivation by Abraham Maslow as the basic theory (metaparadigm)
- The level of theories is broader than other level
- Some theories are not supported by established indicators

Fig 3. The Level of abstraction of Lang and Moleski's aesthetics concepts and theory

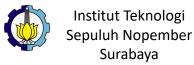


Result and Discussion

Application in Sustainable Architecture

- Lang and Moleski's empirical indicators can be directly applied when sustainable architecture is considered aesthetically pleasing
- If sustainability is the focus, Lang's symbolic aesthetic earlier theory can be used to develop variables and empirical indicators. The variables are building configuration, spatial configuration, materials, lighting, color, and non-visual environment. And for the empirical indicators can obtain from the international rating system





Conclusion

- The aesthetic concepts developed by Lang and Moleski is very useful option for developing research methods in architectural aesthetics in the context of sustainable architecture.
- Some of the proposed variables still require more detailed formulation at the empirical indicator level.
- Identifying empirical indicators depends on the research focus, whether the aesthetics or sustainability.





References

- [1] Lee S 2011. Aesthetics of sustainable architecture; Rotterdam 010 Publishers.
- [2] Niezabitowska ED 2018. *Research methods and techniques in architecture*. Routledge https://doi.org/10.4324/9781315165592
- [3] Muhy Al-Din SS, Nia HA 2017 "Beauty" based on the functionality of smart skin in buildings. Open House Int;42:60–9. https://doi.org/10.1108/OHI-04-2017-B0008
- [4] Donovan E, Holder A 2016. *How architecture students gain and apply knowledge of sustainable architecture.* Innov Sustain Futur Present Cent Eur Towar Sustain Build (CESB16), Grada Publ Prague.
- [5] Tatum K, Porter N, Hale J 2017. A feeling for what's best: Landscape aesthetics and notions of appropriate residential architecture in Dartmoor National Park, England. J Rural Stud ;56:167–79. https://doi.org/10.1016/j.jrurstud.2017.09.013
- [6] Caymaz GFY, Hamameh S 2020. Evaluation of Aesthetic, Functional, and Environmental Effects on the Design of Urban Open Spaces: A Case Study of istanbul sishane Park, Turkey. J Urban Aff Contemp 4:67–86. https://doi.org/10.25034/ijcua.2020.v4n2-7
- [7] Rola H 2019. Impact of visual pollution at the entrances of coastal Cities in Lebanon. Eur Sci J ESJ 2019;15:16–27. https://doi.org/10.19044/esj.2019.v15n17p16
- [8] Daugelaite A, Grazuleviciute-Vileniske I 2021. *The Relationship between Ethics and Aesthetics in Sustainable Architecture of the Baltic Sea Region*. Sustainability ;13:2259. https://doi.org/10.3390/su13042259
- [9] Lang, J., & Moleski W. 2010 Functionalism revisited: Architectural theory and practice and the behavioral sciences. Farnham UK: Ashgate Publishing Co.;
- [10] Fawcett, J., & DeSanto-Madeya S 2012. Contemporary nursing knowledge: Analysis and evaluation of nursing models and theories. Fa Davis.

