

How Heritage Learns. An ecosystemic assessment of application of new technology for Energy Use Reduction, Economy and Thermal Comfort (E2+CO) in valorized monumental housing complexes in the Netherlands.

Keywords: Monument, Change, Value, Ecosystem, Energy, Sustainability, Comfort, Impact Assessment.

Architectural Engineering + Technology / Heritage & Architecture

Area of Research: Design & History



The Justus van Effen Block designed by Michiel Brinkman, which serves as case study, from left to right in 1921, 1990 and 2011.

Research Summary: Change in heritage buildings have long-term consequences that are not envisioned at the time of decision-making. This is especially true for the inevitable introduction of new technologies into extant building fabric. The application of an ecosystemic evolutionally approach to the assessment of the impact of executed intentional interventions in valorized heritage buildings will provide new insights into the actors, factors, environmental aspects that motivate for this change as well as consequent effects of this change. This can be illustrated graphically through the retrospective analysis of planned interventions, which will illustrate the wide-ranging long-term afterlife of the choices for, and impacts of interventions. Adaptation to the extant housing stock for E2+Co can be affected in different ways from the strategic to the detail level. This study will evaluate these adaptations and hopes to be able to present an argued case for good and less good adaptations for improved comfort and energy use in the historical valorized housing in the Netherlands as well as show the longer term implications of decisions on the heritage value of valorized housing as change often expedites further change. It is hoped that the study could lead to the development of a methodology or model for evaluation of impact to aid in the decision-making process of the designer.

Research Methodology: The study methodology is based in a reading of archival sources relating to a select number of monumentalized twentieth century housing case studies. Archival research I coupled with interviews, on-site observation and actor-factor analysis. To set the basis for the analysis a multi-disciplinary ecosystem position is required which transcends the traditional realms of architecture and heritage. This provides new modalities for presentation of the analysis.

Key Publications:

Kuipers, M.C. and Clarke, N.J. The Kiefhoek Housing Estate, Existenzminimum Monument or Existenzminimum for monuments? In Roberta Grignolo. *Encyclopaedia of Reuse of XXth Century Heritage*. Mendizio: Mendrizio Academy Press (In Press).

Clarke, N.J. 2015. Futures for a collective past. The South African after-life of the European Architectural Heritage Year of 1975. In: Michael Falser, Wilfried Lipp (eds.) *A Future for our Past*. The 40th anniversary of European Architectural Heritage Year (1975-2015). Berlin: Bäßler.



Nicholas J Clarke

PhD started in: 2011

MPhil (Environmental Design in Architecture) 2005 (CANTAB)

B.Arch 1999 (UP)

Promoter(s): Prof Dr Marieke C Kuipers

Daily Supervisor(s): Dr Hielkje Zijlstra

Email: N.J.Clarke@tudelft.nl

Phone: +31 647 804 069

Main Question: What are the agents for change in monumentalized housing and can the application of ecosystemic evolutionary thinking to the field heritage value management bring new insights to the process of change?

Deliverables: The research will not only deliver in depth historiographies of a number of case studies but also develop and test the analogous applicability of ecosystem processes to built environment change cycles.

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