

INTERNATIONAL SYMPOSIUM
30 & 31 OCTOBER 2017

THERMAL STANDARDS IN ARCHITECTURE

REFLECTING ON THE GLOBALISATION OF PASSIVE CLIMATE CONTROL

ACCADEMIA DI ARCHITETTURA, MENDRISIO,
UNIVERSITÀ DELLA SVIZZERA ITALIANA (SWITZERLAND)
PALAZZO TURCONI (AULA LEZIONE T 1.02)

ORGANISED BY

the Swiss National Science Foundation Professorship for Architecture (Accademia di architettura, Mendrisio), in collaboration with the Institute for Constructive Design (School of Architecture, Design, and Civil Engineering, Zurich University of Applied Sciences, Winterthur)

Prof. Dr. Sascha Roesler (Università della Svizzera italiana)
Dr. Sabine von Fischer (Zurich University of Applied Sciences)
Dr. Madlen Kobi (Università della Svizzera italiana)

DAY 1 – 30 OCTOBER 2017

Welcome address, Prof. Riccardo Blumer / 14:00 – 14:15

I. THERMAL UNIVERSALITY

Prof. Sascha Roesler, The Legacy of Passive Climate Control / 14:15 – 14:45
Dr. Sabine von Fischer, Concepts and Contexts of Energy Efficiency / 14:45 – 15:15
Coffee Break / 15:15 – 15:45
Jörg Lamster, Sustainable Goals versus Standardised Temperatures / 15:45 – 16:15
Prof. Elisabeth Shove, The Comfort of Standards and Standards of Comfort / 16:15 – 16:45
Discussion / 16:45 – 17:30

DAY 2 – 31 OCTOBER 2017

II. THERMAL STANDARDS AND THE ARCHITECT

Prof. Jonathan Sergison, Thermal Standards and Practice / 09:00 – 09:30
Andreas Hofer, More than Housing: The Holistic Approach / 09:30 – 10:00
Discussion / 10:00 – 10:30
Coffee Break / 10:30 – 11:00
Prof. Muck Petzet, How to create a DIY Certification System / 11:00 – 11:30
Prof. Astrid Stauer, Culture of Building + Energy = Energy Culture / 11:30 – 12:00
Discussion / 12:00 – 12:30
Lunch / 12:30 – 14:00

III. THERMAL GOVERNANCE AND THE CITY

Prof. Andrew Witt, Urban Solar Design / 14:00 – 14:30
Dr. Giulia Romano, Energy Efficiency and Thermal Insulation in Urban China / 14:30 – 15:00
Discussion / 15:00 – 15:30
Coffee Break / 15:30 – 16:00
Lionel Epiney, Thermal Regulations in Santiago de Chile / 16:00 – 16:30
Prof. Emma Street, The (Re)Scaling of Regulatory Governance / 16:30 – 17:00
Response, Dr. Madlen Kobi / 17:00 – 17:15
Final Discussion, all participants / 17:15 – 18:00

Thermal standards exert an ever-increasing impact on architecture. What used to be a minor issue in planning processes a mere three decades ago has become a rigid determinant in the design practice of architects. Recent building legislation has begun to limit the spectrum of possible solutions to the extent that thermal standards increasingly govern the concept, structure and form of buildings. The imperative to insulate building envelopes with little regard to maintaining a diversity of microclimates in the interior is just one prominent example. These developments can be traced to how thermal standards have been triumphed as a silver bullet by Western societies on their path towards energy transition and sustainable architecture.

“Green goes mainstream” (Raymond J. Clark / Peter Ellis) has in particular seen a proliferation of thermal standards, regulations and labels. Agencies like the US-American LEED, the British BREEAM, the German Passivhaus or the Swiss Minergie, 2000-Watt Society, and SNBS offer certifiable solutions for thermal comfort in combination with the promise of sustainability in architecture and for cities. These “green-mainstream” standards are successors to the passive rationale of the bioclimatic architecture of the 1970s, promoting “the use of architecture as a primary energy device” (American Institute of Architects, 1978).

Today, worldwide comfort in buildings increasingly relies on the import and export of thermal standards. This has resulted in their global circulation and a competition between the various agencies promoting them. However, such standards emerge out of specific local cultural circumstances and architectural traditions. This area of conflict between a globalised rationality and the need for local adaptation is the subject of the conference. Based on case studies from Switzerland and various international contexts, the conference examines the ways in which the global circulation of thermal standards affects and translates into local design and building practices.

The conference addresses thermal standards by following an implementation-oriented and multi-disciplinary approach. “Regulations only exist in and through practice” (Imrie / Street

2011) and the researcher needs to follow them “through society” (Latour 1988). Thermal standards result from complex social negotiation processes involving actors from government departments, research institutions, investment companies and architectural offices. As a result, the circulation and promotion of standards are driven by architectural, political and economic agendas. The impact of translating thermal standards into building techniques hence extends beyond the mere single house to encompass whole urban contexts and the entire global challenge of sustainability. The conference will be held in three panels followed by a roundtable discussion.

I.
THERMAL UNIVERSALITY

Panel I explores the underlying assumptions and objectives of thermal standards. The panelists discuss the current implementation of thermal knowledge as emerging from globally oriented architectural practice, whereby thermal comfort has become a measurable standard calculated by heating, cooling, ventilation, air-conditioning experts. This panel offers an overview on the guiding of overall concepts for regulating indoor microclimates such as “passive climate control”, “energy efficiency”, “comfort” and “sustainability”. Further, it addresses the problem of industry standards of thermal comfort in as far as they potentially conflict with the aims of social, economic and ecological diversity.

II.
THERMAL STANDARDS AND THE ARCHITECT

Panel II inquires into the ambiguous relationships between architects and thermal standards and regulations. Although this combination can undoubtedly promote engagement, at the same time it can also diminish a sense of responsibility in that goals are delegated to set norms and certifying institutions. The participants of this panel critically discuss their experiences with certified and non-certified build-

ing practices in terms of the autonomy of the architect. Place-based, low-tech thermal solutions challenge the omnipresence of global thermal standards through a direct engagement with local climatic contexts.

III.
THERMAL GOVERNANCE AND THE CITY

Panel III reflects on thermal governance as part of a broader understanding of thermal regulations in urban contexts. While scrutinising the role of thermal standards at the building scale, architects and urban planners encounter new challenges at the neighbourhood and the city scales, which represent the predominant forms of organisation in today’s urbanised societies. At the heart of the epistemological transformation of energy efficiency is the “city climate”, entailing new methods of thermal governance. To this end the panel questions whether the energy-source supply of cities can be taken simply as a private matter.

