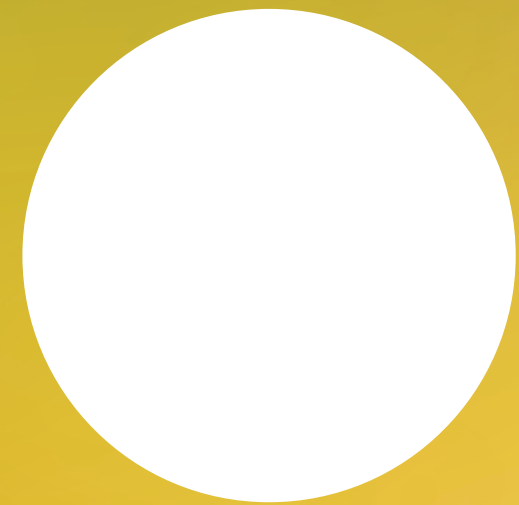


OCTOBER 31,
2016

09:00 AM – 6:00 PM,
PALAZZO CANAVÉE, ROOM C3.89

ACCADEMIA DI ARCHITETTURA
(MENDRISIO)
UNIVERSITÀ DELLA SVIZZERA ITALIANA
(SWITZERLAND)



INTERNATIONAL SYMPOSIUM

THE URBAN MICROCLIMATE AS ARTIFACT

A COMPREHENSIVE REFLECTION of the concept of the “microclimate” and “microclimatology” (Helmut Landsberg) from the perspective of architectural theory as well as cultural and social sciences is still barely developed. Microclimates are far more than physical-thermodynamic phenomena; microclimates are fabricated thermal places offering valuable insights into everyday culture, social conditions, and political aspirations of energy-based and urbanized societies. By bringing together different case studies from cities around the world, the symposium will explore microclimates as human artifacts approached with a combination of social, cultural and architectural research methods.

THE SYMPOSIUM intends to outline the concept of the microclimate and its variations for urban indoor and outdoor spaces highlighting its relevance for contemporary architecture and urban design practice. Lisa Heschong’s notion of “thermal delight,” which celebrates and cultivates the diversity of microclimatic conditions rather than leveling them, is yet to be created for the 21st century.

SWISS NATIONAL SCIENCE
FOUNDATION PROFESSORSHIP
PROF. DR. SASCHA ROESLER,
DR. MADLEN KOBI,
DALILA GHODBANE,
LIONEL EPINEY

INSTITUTE FOR THE HISTORY
AND THEORY OF ART
AND ARCHITECTURE

- INTRODUCTION
PROF. SASCHA ROESLER
9:00–9:30
- MILAN, ITALY
DR. ROBERTO LEGGERO
9:30–10:15
- COFFEE BREAK 10:15–10:45
- PALM SPRINGS, USA
DR. MATTHIAS BRUNNER
10:45–11:30
- TAICHUNG, TAIWAN
PROF. PHILIPPE RAHM
11:30–12:15
- JAKARTA, INDONESIA
DR. LIZZY VAN LEEUWEN
12:15–13:00

- LUNCH 13:00–14:15
- PARIS, FRANCE
DR. IGNACIO REQUENA-RUIZ
14:15–15:00
 - KOUDOUGOU,
BURKINA FASO
PROF. FRANCIS KÉRÉ
15:00–15:45
 - COFFEE BREAK 15:45–16:00
 - MANILA, PHILIPPINES
DR. MARLYNE SAHAKIAN
16:00–16:45
 - COFFEE BREAK 16:45–17:15
 - DISCUSSION
17:15–18:00

The intellectual history of the “microclimate” is closely linked to the development of the modern city. Microclimate as an interdisciplinary concept that is subject to scientific knowledge and application was not created until the first half of the 20th century in meteorology. Only in the second half of the 20th century was it then transferred to the sphere of influence of architects and urban planners. Based on so-called “city climate” research, a large number of natural science and planning-related publications exist today that describe the physical specifics of urban “microclimates” and their relevance for the thermal performance of buildings and city districts.

However, a comprehensive reflection of the concept of the “microclimate” and “microclimatology” (Helmut Landsberg) from the perspective of architectural theory as well as cultural and social sciences is still barely developed. We must assume that the predominant scientific-technical approach obscures the eminent sociocultural implications that accompany the artificial creation of urban microclimates. By bringing together different case studies from cities around the world, the symposium will explore microclimates as human artifacts approached with a combination of social, cultural and architectural research methods. The contributions might address one or several of the following four main aspects:

1) **Materiality:** The crucial task of today’s microclimate research consists of comprehending and describing the man-made materiality of the microclimate as human artifact, even though it appears to be a natural, nonmaterial, and physical phenomenon. Therefore, the microclimate (as artifact) actually stands at the center of theoretical debates on “materiality” and “material culture” which have been conducted in anthropology and science and technology studies for decades.

2) **City Climate:** The closer examination of microclimates undermines the concept of climate as a natural entity. Microclimates are embedded in the context of rampant city climate phenomena — take, for example, the recurrent haze which affects large cities in Southeast Asia. Thus, urban microclimates are both intentional and unintentional. And, as in the case of the haze, they are transnational as well as local phenomena.

3) **Mutual Reactions:** Contemporary cities are coined by mutual reactions between inside and outside, anticipating an incremental and not bipolar connection between interior and exterior spaces. By focusing on the stabilization of thermal conditions inside of buildings, comfort research in the 20th century tended to neglect the empirical reality of overlapping thermal zones, connecting the inside and the outside of buildings.

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4) **Quality of Life:** Contradictions and conflicts between sustainability, economic development, and social justice are mounting issues in the manifestations of urban microclimates. We might speak of the class character of urban microclimates through the correlation between the social class of a district and its quality of life. People belonging to more affluent social classes often live in areas where more investments are made to create favorable microclimates. However, the increasing air pollution in public spheres of mega-cities may again level these class distinctions of residential or workplace spaces.

THE SYMPOSIUM intends to outline the concept of the microclimate and its variations for urban indoor and outdoor spaces highlighting its relevance for contemporary architecture and urban design practice. Lisa Heschong’s notion of “thermal delight,” which celebrates and cultivates the diversity of microclimatic conditions rather than leveling them, is yet to be created for the 21st century. Urban microclimates are far more than physical-thermodynamic phenomena; microclimates are manifold phenomena offering valuable insights into everyday culture, social conditions, and political aspirations of energy-based and urbanized societies.

PALM SPRINGS USA

SASCHA ROESLER

INTRODUCTION: THE URBAN MICROCLIMATE AS ARTIFACT

Microclimate as a concept that is subject to scientific knowledge and application was not created until the first half of the 20th century in meteorology. It was more and more transferred to the sphere of influence of architects and urban planners in the second half of the 20th century. Thanks to so-called urban climate research, today there exist a large number of scholarly and planning-related publications that describe the specifics of urban “microclimates” and their relevance for the thermal performance of buildings and city districts. A comprehensive reflection of the concept of the microclimate in terms of architectural theory however, is still missing as yet. In my presentation, I will introduce the still young intellectual history of mi-

croclimates—as urban climate, as artificial climate, and as overlapping zone of outside and inside conditions. The conceptual emergence of the microclimate is closely linked to the history of the modern city.

SASCHA ROESLER is an architect and architectural theorist, working at the intersection of *architecture, ethnography and science studies*. Sascha holds a Doctorate from ETH Zurich. Since 2016, he is a Swiss National Science Foundation Professor of Architectural Theory at the Accademia di architettura in Mendrisio (Switzerland). As a professor, Sascha launched a four years research project on “passive climate control and the city”. The research project aims to provide a more concise theoretical understanding of passive climate control under contemporary urban conditions. Sascha has been a senior researcher and academic coordinator at the Future Cities Laboratory of ETH Zurich in Singapore. His recent publications comprise – based on his PhD – the first history of ethnographic research conducted by modern architects (Welterkonstruktion, Gebr. Mann Verlag, Berlin 2013) and a documentation on the Habitat Marocain in Casablanca, Morocco (Habitat Marocain Documents, Park Books, Zurich 2015). Sascha is winner of the Swiss Art Awards 2012 (for Architecture), funded by the Swiss Ministry of Culture.

MILAN ITALY

ROBERTO LEGGERO

MICROCLIMATES IN A MEDIEVAL CITY

“A wise man should build rather for summer than for winter“. This sentence of Leon Battista Alberti (1404-1472) – an important witness of the conditions and characteristics of medieval cities – deal with one of the most important problems considering the relationship between the climate and the medieval city. This problem could find a partial solution only for the houses of the richest but building for summer a townhouse for common people was a completely different matter. Obviously the medieval means to create favourable microclimates were less powerful than today so, in the past, the quality of life in different urban districts was less differentiated than nowadays. On the contrary at individual level the quality of clothes and the quantity of

purchasable heating fuel could make the difference. But, as we will see, there were also some practices that could establish better micro-climate conditions or better personal conditions also in popular contexts.

ROBERTO LEGGERO is research associate of the Laboratorio di Storia delle Alpi (Accademia di Architettura, Università della Svizzera italiana). He has studied Philosophy at the Università degli Studi di Milano and written a PhD in Medieval History at the Università degli Studi di Padova. Before joining the Accademia di Architettura he was working at the Università degli Studi di Torino. Roberto Leggero is member of the Istituto Storico della Resistenza e della Società Contemporanea “Pietro Fornara” (Novara). Selected recent publications: *Dando Eis locum idoneum. Identità politica delle comunità rurali del Novarese in età medievale*, Milano 2008. *M. Montanari - R. Leggero, San Colombano al Lambro e il suo colle*. Dalla signoria viscontea al dominio sforzesco (secc. XIV-XV), Novara 2009. *Comunità e lavoro. Una riflessione prima e a margine, in Montagne, comunità e lavoro tra XIV e XVIII secolo, a cura di R. Leggero, MAP, Mendrisio 2015*. «Al comune e agli uomini». *I testamenti nella formazione del “patrimonio fondiario collettivo” delle comunità della Vallemaggia nel tardo medioevo*, in “Archivio Scialoja-Bolla”, 1 (2014), pp. 159-189.

At the beginning of the 20th century, Palm Springs was a desert resort that was mainly visited because of its climate. Its wealthy guests did not expose themselves permanently and unprotected to the desert climate, as the native population and the first settlers almost did, but applied it in controlled doses. For the remainder of their time, actively and passively conditioned interior spaces were created. Richard J. Neutra’s Kaufmann Desert House, built in 1946-47, was based on these habits, but went an important step further by adding the terraces to the conditioned space, using radiant cooling and heating. This allowed opening the large sliding doors and windows at almost every outdoor temperature. By this, the physical boundaries between the indoors and

the outdoors became almost completely removed, and the climatic boundaries didn’t correspond to the physical ones any longer, but were moved from the house away and blurred. Neutra regarded the microclimate thus created an essential component of his efforts to connect architecture with nature.

MATTHIAS BRUNNER is an architectural historian and architect who teaches and researches at the Institute for the History and Theory of Art and Architecture at the Mendrisio Academy of Architecture. He studied architecture at the ETH Zurich and the University of Strathclyde, Glasgow. He worked for Hans Peter Wörndl, Vienna, and for Galli Rudolf Architects, Zürich, where he was responsible for the project Sonderschulheim Ilgenhalde. In 2010, he became collaborator of the SNSF research project From Ravenna to Vals. Light and Darkness in Architecture from the Middle Ages to the Present, directed by Daniela Mondini and based at the Mendrisio Academy of Architecture. As part of this project, he organized in 2014 the international conference Le jeu savant. Light and Darkness in 20th Century Architecture and edited its proceedings, both in collaboration with Daniela Mondini and Silvia Berselli. In 2016, he received his PhD for his dissertation Essential Sensations. Richard Neutra und das Licht. Much of the archival research was done in 2012-13, when he was Visiting Graduate Researcher at UCLA, supported by a SNSF Mobility Grant. On various occasions, he published and lectured on topics of his dissertation, for example at the SAH 2016 Annual International Conference in Pasadena.

TAICHUNG TAIWAN

PHILIPPE RAHM

THERMODYNAMIC URBANISM

Urban Design was traditionally primarily based on climate, comfort and health issues as we could read in the treatises of Vitruvius, Alberti or later Haussmann, talking about wind and solar exposures, humidity and temperature rates. These fundamental causes of the urban design were ignored during the 20th century thanks to the enormous use of fossil energy by pumps, motors, fridge, heating systems and air conditioning that cause today the greenhouse effect and the global warming. Sustainability and fight against climate change force the architects and urban designer to take back seriously the climatic issue in order to base their urban development plan and public spaces design on more consideration to the local climatic context and local

energy resources. The Jade Eco Park in Taichung, Taiwan, we are currently building is an example of how to base an urban masterplan on climatic and pollution geography and how to use green energy to improve the comfort in the public space by creating zero energy micro-climate.

PHILIPPE RAHM (born in 1967) is a swiss architect, principal in the office of “Philippe Rahm architects”, based in Paris, France. His work, which extends the field of architecture from the physiological to the meteorological, has received an international audience in the context of sustainability. He started to teach architecture design at the GSD, Harvard University, USA, in Fall 2014. In 2002, Mr. Rahm was chosen to represent Switzerland at the 8th Architecture Biennale in Venice, and was one of the 25 Manifesto’s Architects of Aaron Betsky’s 2008 Architectural Venice Biennale. His recent work includes the First Prize for the 70 hectares Taichung Gateway Park in Taiwan currently under construction, an 2700 m2 Exhibition architecture for the Luma Foundation in Arles, France, an office building of 13000 m2 at La Défense in France for the EPADESA; a connective condominium for the IBA in Hamburg, Germany and a studio house for the artist Dominique Gonzalez-Foerster in 2008. Monographic books include: “Physiological architecture” published by Birkhäuser in 2002, “Distortions”, published by HYX in 2005, “Environ(ment): Approaches for Tomorrow”, published by Skira in 2006, “Architecture météorologique” published by Archibooks in 2009 and “Constructed atmospheres” published by Postmedia, Milan, Italy, in 2014.

JAKARTA INDONESIA

LIZZY VAN LEEUWEN

AIR CONDITIONING IN JAKARTA: THE HOUSEHOLD AND THE AIRPORT AS MICROCOSMS OF THE STATE

In Jakarta, Indonesia, in the 1990s the proliferation of air conditioned public and private space exploded. In the process, air conditioning turned out to appear as an excellent marker of gengsi, or prestige. Soon enough an urban discourse developed in which the manipulation of symbols related to air conditioned space or bodies was highlighted. The ‘proper’ cultural knowledge needed to participate in this discourse was however never meant to be evenly distributed. This ensued in a specific and revealing urban pattern of symbolic interpretations of air conditioning in its widest sense. At the core of this development was the crucial exclusion of or inclusion in the ‘class’ of Indonesian citizens. My case study is a comparison between the state of

things at the national airport Soekarno-Hatta and the Jakarta living room of Aunt Paula, a relative.

LIZZY VAN LEEUWEN was trained and initially employed as a lawyer. In 2005 she got a PhD in Cultural Anthropology at the University of Amsterdam, after doing long-term field work in Indonesia in the 1990s. She was affiliated with the Meertens Institute for Dutch Culture and Language in Amsterdam. Since 2008 she is self-employed as a researcher and author. She is a regular contributor to De Groene Amsterdammer, Holland’s oldest left-leaning weekly. She published extensively about colonial cultural heritage matters and Indonesian politics and history. Another favourite subject is farmers’ suicide in Europe and the US as a cultural and historical phenomenon. Book publications: *De Hanenbalen, Zellmoord op het platteland*. Januari 2013. Uitgeverij Contact, Amsterdam. *Lost in Mall*. An ethnology of middle-class Jakarta in the 1990s. April 2011. KITLV Press, Leiden. *Ons Indisch Erfgoed, Zestig jaar strijd om cultuur en identiteit*, September 2008. Uitgeverij Bert Bakker, Amsterdam. *Airconditioned Lifestyles: Nieuwe Rijken in Jakarta*. Uitgeverij Het Spinhuis, 1997.

PARIS FRANCE

IGNACIO REQUENA-RUIZ

BUILDING ARTIFICIAL CLIMATES IN MODERNISM: THE CASE OF THE HOUSE OF BRAZIL IN PARIS

The evolution of the notion of climate during the first half of the twentieth century led to different cultural representations of the relationship between the human body and the built environment. As a part of the global modernist project, climate became an agent of architectural transformation and influenced architectural design in a variety of ways. This presentation’s primary focus is a case study of the House of Brazil in Paris (1953-1959), one of the latest collaborative works between Le Corbusier and the climatic engineer André Missenard. This building originally encompassed a number of strategies previously explored in other projects set in both warm and cold climates, with the aim of creating an ideal indoor climate for

sheltering the modern way of life. In spite of this, the building’s history rather illustrates the contradictions between the climatic homogenization aimed by Modernists and the role of architecture in the cultural and climatic adaptation of foreign populations with differing views on climatic comfort.

IGNACIO REQUENA-RUIZ is a PhD architect by training and an Associate Professor at ENSA Nantes, where he conducts research at UMR CNRS Ambiances Architectures Urbanités – CRENAU. He has been a researcher at the University of Alicante and postdoctoral fellow at the CERMA laboratory. He has been awarded a research fellowship by the Fondation Le Corbusier (2013). His work deals with the cultural, technical and sensorial dimensions of climates in architecture and urbanism, from the early twentieth century until the present day. He has written articles and papers in the area of architectural and urban atmospheres and his more recent publications are “Building Artificial Climates. Thermal control and comfort in Modern Architecture (1930-1960)”, “The utopia of the ‘artificial climates’. Rhetoric and representations in French architectural magazines (1930-1950)” and “Thermal comfort in twentieth-century architectural heritage: Two houses of Le Corbusier and André Wogenscky”.

KOUDOUGOU BURKINA FASO

DIÉBÉDO FRANCIS KÉRÉ

CONNECTING THE BOUNDARIES

The capital city of Burkina Faso, Ouagadougou, faces a rapid growth of its population. This is not only due to demographic growth, but also to migration from the countryside. In particular, an important factor is the increasing number of young students that, after graduation, moves to the cities with universities, such as Ouagadougou and Koudougou, the country’s third largest city. The major urban problem is the growing demand of housing and public infrastructure. Creating the urban texture is then entrusted to private initiatives which, due to limited income, are often reduced to one-story buildings. The result is a horizontal urban growth which extends beyond the city’s boundaries and creates severe conflicts with the surrounding communities. My contribution to

the conference “The Urban Microclimate as Artifact” will consist in a report on a real intervention on the edge of the city of Koudougou, which faces the same growth as Ouagadougou. The project, consisting in a high school building, is an attempt to create a climate-responsible structure by using locally available resources.

FRANCIS KÉRÉ is a German-trained architect from the small West African town of Gando in Burkina Faso. As the first son of the head of his village, his father allowed his son to attend school even though many villagers considered conventional western education to be a waste of time. He was eventually awarded a scholarship to apprentice in Germany, where he went on to earn a university degree in architecture and engineering. Kéré has since focused on reinvesting his knowledge back into his Burkina Faso community and beyond. Using his formal training, he has developed innovative construction strategies that combine traditional materials and building techniques with modern engineering methods. Since founding Kéré Architecture in 2005, his work has earned numerous prestigious awards such as the Global Award for Sustainable Architecture, BSI Swiss Architectural Award, Marcus Prize, Global Holcim Gold Award, and Schelling Architecture Award. Kéré was granted the honor of chartered membership of the Royal Institute of British Architects (RIBA) in 2009, and honorary fellowship of the American Institute of Architects (AIA) in 2012. He has held professorships at the Harvard Graduate School of Design and the Swiss Accademia di Architettura di Mendrisio.

METRO MANILA THE PHILIPPINES

MARLYNE SAHAKIAN

KEEPING COOL IN METRO MANILA: A SOCIAL PRACTICE APPROACH TO UNDERSTANDING AIR-CONDITIONING CONSUMPTION

Southeast Asia is growing in every possible way. Addressing the electricity needs of the region’s urban households is particularly relevant where cooling is concerned. Against the backdrop of the environmental impact of household electricity consumption and the history of cooling practices, Marlyne Sahakian explores current practices tied up with air-conditioning consumption, from sleeping at night, to caring for a child, or being fashionable. Housing trends are explored in depth, as certain ‘west is best’ styles may be locking in the need for artificially cooled air for years to come. General trends in the region will no doubt contribute to an increase in air-conditioning consumption, yet current consumption patterns are not

homogenous: how people go about keeping cool in Metro Manila varies greatly by socio-economic group and neighborhood. Sahakian considers what the future might hold for keeping cool in one of the hottest regions of the world, emphasizing the need to maintain practices that engage with non mechanical forms of cooling.

MARLYNE SAHAKIAN (born in 1974) is a Senior Researcher in the Faculty of Geosciences and the Environment at the University of Lausanne. She is currently coordinating national and European research projects on household energy and food consumption, working with interdisciplinary teams. Her research interest is in understanding natural resource consumption patterns and practices, in relation to environmental promotion and social equity, and identifying opportunities for transitions towards more sustainable societies. She writes regularly for journals in the field of sustainability, as well as food and energy consumption. Her recent work includes a book titled *Keeping Cool in Southeast Asia: energy consumption and urban air-conditioning* (Palgrave Macmillan, 2014) and an edited volume titled *Food Consumption in the City: Practices and patterns in urban Asia and the Pacific* (Routledge Studies in Food, Society & the Environment, 2016). She is also a founding member of SCORAI Europe, a network in the field of sustainable consumption research and action.