Les Cahiers de la recherche architecturale urbaine et paysagère

6 | 2019

Architectures des milieux hyper-conditionnés

Keeping Warm in Subtropical Winter

When Everyday Life Disrupts the Concept of Hyper-Conditioned Environments in Chongqing (Southwest China)

Madlen Kobi

Electronic version

URL: <http://journals.openedition.org/craup/2880>

ISSN: 2606-7498

Publisher

Ministère de la Culture

Electronic reference

Madlen Kobi, « Keeping Warm in Subtropical Winter », *Les Cahiers de la recherche architecturale urbaine et paysagère* [Online], 6 | 2019, Online since 20 December 2019, connection on 25 December 2019.

URL : <http://journals.openedition.org/craup/2880>

This text was automatically generated on 25 December 2019.

Les Cahiers de la recherche architecturale, urbaine et paysagère sont mis à disposition selon les termes de la Licence Creative Commons Attribution - Pas d'Utilisation Commerciale - Pas de Modification 3.0 France.

Keeping Warm in Subtropical Winter

When Everyday Life Disrupts the Concept of Hyper-Conditioned Environments in Chongqing (Southwest China)

Madlen Kobi

Introduction

I always thought that it was standard that there was no light in winter, because I had never left Chongqing. Once, someone from Guangzhou even told me that it is really very gloomy here. But only when I had been elsewhere did I realize that our winters are different.

(Hu Lijing, white-collar worker, 28 years old, Chongqing, December 2017)¹.

- ¹ The city of Chongqing in Southwest China is nicknamed “fog city” (*wucheng*) in Chinese because in wintertime the fog drowns its high-rises and shabby one-storey buildings. After a few days living in this fog, the curious sensation of an apocalyptic mood is imprinted on one’s mind. The fog is like a grey curtain of water droplets that whitewashes the colourful life of this city (fig. 1). The red-painted temple windows, the sumptuous greenery and the coloured billboards all appear filtered through different tones of grey. In addition, winter temperatures in this subtropical zone rarely exceed 10°C. Nevertheless, people often spend time in outdoor spaces – playing cards, going for walks or dancing in community squares. On the few winter days when the sun finally burns through (statistically, an average of only one in seven days is sunny), residents sunbathe with a smile and take selfies in front of trees or bushes whose flowers still blossom brightly. Happy at having escaped the usual greyness, people readily share and celebrate any good weather on the social network WeChat.

Figure 1. Atmospheric impression of Yangtze River in central Chongqing, December 2017.

© Madlen Kobi

- 2 While the outdoors in wintertime Chongqing may be rather hostile, indoor conditions do not really compensate for such a grey and unfriendly atmosphere either. In many apartments, temperatures are pretty much the same as outdoors, which means that the thermometer in the living room shows around 10°C. This is mainly due to houses having no integrated heating systems. Often, Chongqing residents sit on their sofas in their winter coats, with the windows wide open – at the most holding a cup of tea to warm their hands and souls (fig. 2). When people are really cold, they turn on an electric heater or push their seats closer to the air-conditioning unit from where hot air is emitted. Keeping one's body warm through these sorts of rudimentary and selective heating strategies offers some relief at least from the wet winter chill.

Figure 2. No contradiction for Chongqing people: a running air-conditioning unit and permanently open windows, January 2018.

© Madlen Kobi

- 3 While external weather conditions have long been the field of climatologists, consideration of indoor climate control has gained momentum with the rise of modern architecture. Since the mid-twentieth century, the attempt to achieve thermal constancy in indoor climate has become a kind of obsession². Inherent in modern architecture is the desire to be entirely independent from the weather outdoors³. Hermetically sealed indoor laboratories were first established in the United States in the 1910s and 1920s, where researchers affiliated with the American Society of Heating and Ventilating Engineers tested the physical reactions of people in response to different climatic parameters. They expounded a perception of the body as a mechanical entity that reacts independently from socio-cultural notions of comfort. These laboratory experiments along with pressure from the industry set the parameters for indoor thermal comfort at a temperature of between 20°C and 22°C with 50% humidity. Several studies since have engaged with this norm, its implementation and the supposed standardization of indoor climates⁴. While there exists a range of literature on the effect of air-conditioning on architecture and social life in tropical environments⁵, little research has been conducted into the management of seasonal conditions in subtropical areas where winters are significantly cooler than summers and where central heating is often missing.⁶
- 4 In this paper, I scrutinize the notion of urban citizens living in “hyper-conditioned environments” – a term I use to refer to the aforementioned comfort norms and the control of indoor climates. The concept of being “hyper-conditioned” also suggests that builders and architects have the power totally to shape indoor climates. In everyday life, however, inhabitants as users of these material structures apply place- and time-specific socio-thermal practices to deal with climatic conditions. This paper juxtaposes the notion of “hyper-conditioned environments” with ethnographic data collected during four months of fieldwork in Chongqing. Data was gathered through house visits

and conversations with inhabitants assessing their climate control practices, as well as semi-structured interviews with architects and other experts involved in the house construction. Furthermore, through living in different households myself, I auto-ethnographically experienced how my flatmates regulated their own indoor climate, where in the apartment they carried out various practices to stay warm, what devices they used and what kind of clothes they were wearing. Most of my informants are between 30 and 50 years old and belong to the steadily growing urban middle class in China, which means they can afford to live in high-rise buildings and pay the electricity costs for running devices, such as the air-conditioning, according to their needs.

Embodied Knowledge, Urban Climate and Socio-Thermal Practices

- 5 Body, climate and urban landscapes meet in and through human-created architectural forms. Interventions in the built environment are meant to create thermal and environmental conditions favourable for human beings. People react immediately to changing climatic conditions: No matter what kind of weather, the aim of the body's metabolism is to maintain its base temperature of approximately 37°C in order to feel comfortable. Thermal spaces in the built environment relieve the body's thermal stress. Sweating can be reduced through the provision of cool, shady spaces; shivering can be dealt with by wearing an additional layer of clothing or a fireplace that warms up cold bones⁷. The most widespread and commonplace method is the regulation of body temperature through clothing, not only outdoors but also in air-conditioned office buildings or other indoor areas⁸.
- 6 While these descriptions make the human body sound like a mechanical entity that can be regulated through the interventions of engineers and architects, cross-cultural data prove that there exists a wide range of what people actually consider comfortable⁹. Climate as a body-external factor is incorporated in embodied place-specific knowledge through differing use of material objects. Embodied climate knowledge translates into skills to deal with a given context, as Flitsch outlines:

By means of the technical use of a person's body and their multiple sensory perceptions of artefacts, humans embody their everyday knowledge. [...] Skills define standards to 'translate' this knowledge into matter¹⁰.
- 7 Beyond the social context, thermal perception is linked to atmospheres, sensations and feelings¹¹. Hitchings *et al.*, for example, have shown that their informants in subtropical Wollongong (Australia) developed a range of personal warming strategies to deal with the cool winter season (ranging from the use of small radiators to blankets or drinking warm tea)¹². Indoor temperatures measured in informants' homes varied between 14°C and 22°C, but temperature did not in fact correlate with whether people felt warm. Rather, the thermal situation was perceived and negotiated differently depending on personal attitude, place of origin and economic means¹³. Warming and the perceptions of the physical body thus arise in specific socio-cultural contexts.
- 8 Far from expecting one-sided causal relationships between bodies and climate, I conceptualize the bodies of my informants as part of a material world which is constantly transforming and arranging into new constellations. I align my thinking with a concept of bodies outlined by Wallenborn and Wilhite, where the body is essential for the execution of everyday socio-thermal practices:

on the one hand, bodies are constitutive of practices, but on the other they are constituted through practices. Seen this way, bodies are not limited to the physiological body, but can be considered as extended through objects and materialities¹⁴.

- 9 Although not explicitly, this approach aligns with the ideas of Schatzki, who proposes to think social phenomena as consisting of nexuses between human/non-human arrangements (in the sense of Actor-Network Theory) and practices¹⁵. Schatzki describes these nexuses as time and context specific. With regard to climate-related activities, this means that they change depending on the time period – that is, they were different in the socialist period, for example, to how they are today. In addition, despite climatic conditions being similar in many parts of the world, local socio-thermal practices differ because they depend on available objects, on the broader political and economic context as well as on socio-cultural notions of what represents comfort. As Heschong emphasizes, “thermal delight” is always part of the socio-cultural environment: “Places with desirable thermal qualities naturally tend to become social spaces as people gather to take advantage of the comfort found there¹⁶.”
- 10 Issues of thermal comfort have long been approached by simply focusing on the mitigation of body temperature, but neglecting the body’s embedding in a social context. Shove criticizes such an angle, in that
[h]aving framed questions of comfort as questions about the relations between the human body and its environment, thermal comfort researchers are unable to acknowledge or accommodate cultural variation¹⁷.
- 11 Ethnographic approaches seem, therefore, more than necessary to provide a complementary view on comfort issues.
- 12 In this paper, I take bodily practices as starting point for an analysis of urban climatic landscapes. The body is not only relevant with regard to sensing thermal comfort indoors; it is also a means to experience outdoor climatic conditions. Through her concept of “embodied space”, Low emphasizes the central role of the body as a spatially mobile field for locating oneself and for making spaces, such as in shaping urban landscapes:
This perspective solves many of the problems inherent in a solely material-culture approach that records the built environment and landscape as a container for people rather than a creation of their own bodies, movements, and activities¹⁸.
- 13 The relationship between corporeality and the built-up metropolis is hence a constitutive and mutually defining one¹⁹. By including the body in an analysis of thermal spaces, we gain a perspective that immediately disrupts the idea of living in a hyper-conditioned environment – as tracing the everyday movements of individual citizens reveals a very nuanced use of urban microclimates. People move towards and between spaces that they consider comfortable and they never stay long in the same place.
- 14 Building upon the centrality of the culturally shaped body for perceiving thermal nuances and creating socio-thermal spaces, this ethnographically grounded paper analyses the interaction of climate, landscape and architecture in an era where hyper-conditioned environments seem to have proliferated. After first outlining the ways in which the architectural structures of houses in Chongqing are permeable, as their materiality opposes a clear-cut division between indoors and outdoors, I analyse how socio-thermal practices such as persisting styles of ventilation underline this

permeability. In what follows, I will sketch the embodied climatic knowledge of Chongqing residents in winter, which consists of employing certain objects and practices to create microclimates in order to mitigate the cold. Before concluding, I will reflect on how the body and everyday practices are useful for understanding the urban as a coherent climatic landscape. An analysis of the socio-thermal practices of Chongqing residents highlights the continuity of spaces across different scales and microclimatic zones in the city.

Climate and Permeable Architecture in Subtropical Chongqing

- 15 Chongqing is one of many rapidly growing inland cities in China. Historically, it was important for trade due to its location on the banks of the Yangtze River. Today, naval transportation has lost its former significance, but the development of industrial production in and around Chongqing as well as its position as starting point of the Belt and Road Initiative have maintained its role as economic hub. Chongqing's inner city is inhabited by roughly 8 millions and is dominated by multistorey high-rise buildings. The summer months of July and August are extremely hot and humid, with average temperatures around 35°C. Chongqing residents and architects all agree that the summer season is painful, many of them sighing: "even if one cannot bear it, one has to bear it"²⁰. The urban heat island effect has further aggravated the heat concentration in Chongqing's inner city. The average difference between urban and surrounding rural areas is 9.7°C, with city-internal differences between the slightly cooler river shore and the densely built-up Shapingba district, for example²¹. Most of my informants confirm that they could not live without air-conditioning²². These factors profoundly influence in what places people sojourn. Preferred, air-conditioned spaces are found on different scales, from the individually controlled private apartments to entire office buildings. Those residents with little economic means spend their afternoons in the cooled shopping malls while others air-condition their apartments. Because the walls and windows of many buildings are poorly insulated, occupants emphasized that in summer they often cover their windows with curtains or large pieces of cloth to maintain the cool inside and prevent excessive energy loss from the intense sun warming rooms (fig. 3).

Figure 3. House facade in summer, where curtains and sheets obstruct windows to prevent the sun warming up the cooled apartments, August 2017.

© Madlen Kobi

- 16 While the summer typically sees people moving between air-conditioned capsules such as the cooled home or car, winters are comparably mild with temperatures on the coldest days ranging between 5°C and 10°C. Further, Chongqing is characterized by a very high humidity of about 80 percent all year round²³, due to the humid air from the south being trapped in the Sichuan Basin where the city is located.
- 17 Everyday life in this humid and rather cool winter climate is made harder through the fact that houses in Chongqing are built without central or district heating installations. This situation goes back to governmental policy from the 1950s that divided China into a heated north and a non-heated south. Urban building stock south of the Huai River line, where Chongqing is located, still lacks an official heating infrastructure. This policy impacts around 550 million Chinese citizens and 43 percent of the nation's urban residential and commercial stock²⁴. While this poses no challenge to the tropical zone in the very south of the country, winters in the subtropical "hot summer and cold winter zone" (*xiare dongleng diqu*) in the northern part of the southern zone are hard to bear without some form of heating.
- 18 The winter situation is further aggravated because the material structure of the houses offers little relief from the cold, the main reason being that they are insufficiently insulated. In summer, the almost constant need for air-conditioning consumes a lot of energy because rooms are permeable to the elements. In winter, the same rooms are as cold as the outdoors due to the lack of central heating. Buildings thus represent a kind of permeable structure in places like Chongqing. Despite environmental efforts such as low carbon policies or mandatory insulation standards meant to decrease the energy demand of buildings, implementation is weak²⁵. So, far from living in hyper-conditioned, well-warmed indoor environments, Chongqing residents search for thermal comfort by navigating back and forth in urban spaces and by employing different body-warming techniques. Depending on their economic, cultural and social

capital, residents use objects such as electric heaters, hot water bottles, warm indoor clothes, or even underfloor heating to keep warm. Warming strategies are often targeted towards the individual body – in contrast to the situation in summer when the cooling of entire rooms is more common.

Ventilation: Permeability through Socio-thermal Practices

[In winter,] I'm always turning on the air-conditioning unit for a while, then I turn it off and open the window. I consider the air from the aircon as different to the air from outside. I don't like being only in the air-conditioned air. I think this unnatural air weakens the body and then one is more vulnerable to getting sick. This can cause the "air-conditioning illness" [*kongtiaobing*]. (Luo Peiyang, 35 years old, literature teacher, Chongqing, September 2017).

- 19 Something that opposes the idea of permanently hyper-conditioned environments is ventilation (*tongfeng*) in the excessive way it is being practised by Chongqing residents. When one observes the facades of multistorey buildings in winter, many windows are seen to be wide open despite outdoor temperatures only being 5-10°C and despite high levels of air pollution. In the local perception, partial heating and ventilation at the same time are no contradiction. Residents argue that in light of the humid climate, opening windows helps to combat the growth of fungi and mould on furniture, clothes and internal walls. Even if an air-conditioning unit would solve this problem through its dehumidifying function, only a few use it very much in winter. Cost is one reason, while other informants complain that it dries out the air, leading to chapped lips and a rather uncomfortable thermal environment. While in other Chinese cities such as Beijing, a middle and upper class hermetically seals and purifies their apartments in order to breathe clean air when being indoors, Chongqing residents, despite knowing about the problematic urban air quality, like to open their windows for ventilation. Some residents also believe that the gloomy air is not pollution, but a result of the high humidity.
- 20 The production of air currents in Chongqing apartments in both winter and summer is an active means of creating thermal comfort – and one that is considered more important than air-conditioning closed spaces. In the summer heat, a breeze is a welcoming cooling influence. At the beginning of September 2017 when the temperature was slowly beginning to drop in Chongqing – it was only around 25°C, but the air was stuffy – I found myself sat in a rooftop bar in a kind of glasshouse. No air-conditioning was available, but one ventilator cooled the table of a couple nearby. As soon as they had left the room, a woman from the neighbouring table went vigorously to fetch the ventilator and turned it towards her own table. On sitting back down, she sighed to her companion: "If there is only wind, it is comfortable²⁶". In a place like Chongqing where summer lasts almost four months, it seems like wind is the only relief from the heat. If you cannot create it through passive ventilation, an electric ventilator or fan will help out. Hand fans are also very common, especially among the elderly.
- 21 Chongqing has very low natural wind current, but the hilly terrain and the rivers traversing the city do facilitate ventilation in the home. Not only residents but also contemporary architects frequently emphasize enthusiastically that they always consider the ventilation abilities of buildings for mitigating heat in summer, despite the almost non-existent wind movement in this region. Wind (*feng*) is also part of *feng*

shui, a set of Chinese geomantic beliefs apropos how properly to handle the orientation and location of a house and also its interior architecture. In summer, cross-ventilation provides a welcome breeze in houses, while in winter, ventilation seems necessary to combat the high humidity²⁷. Evidence for the importance of ventilation is not only part of socio-thermal practices; it has become inscribed in the materiality of different architectural typologies. Traditional stilt houses (*diaojiolou*) and six-storey buildings from the late socialist and early post-reform period alike included ventilation, for example through decorative openings in the walls, in particular above doors or windows. In the external walls of staircases, bricks are creatively arranged to facilitate air flow between indoors and outdoors (fig. 4).

Figure 4: A building with an open staircase providing ventilation. Judging by this feature, the building seems to have been built in the 1970s or 1980s. Huangjueping district, Chongqing, December 2017.

© Madlen Kobi

- 22 The materiality of the facades of remaining old buildings in the city can be read as testimony of the thermal heritage of traditional ventilation techniques. Apartments and long corridors in older houses frequently have windows (or doors) on two opposite sides (e.g. South and North) which facilitate air circulation. According to a local architect, including such passive means of climate control loses relevance in today's high-rise constructions²⁸. Nevertheless, everyday practices in all kinds of architectural typologies hint at the enduring relevance of ventilation for bodily comfort. In high-rise buildings, where apartments often only have windows on one side, I observed that residents sometimes open their apartment doors onto the staircase to create some cross-ventilation. This practice is popular among elderly people who used to live without air-conditioning systems and still embody such old-fashioned, passive climate control measures. Despite the vanishing material testimony through the constant

demolition of old houses, such ventilation practices have not lost relevance in everyday life and they go against the idea of a hyper-conditioned indoors. This is not only the case for Chongqing: in Swiss houses labelled as “Minergie”, walls are heavily insulated to improve the passive warming and cooling of the indoors and air exchange is mechanically regulated. The inhabitants, who are meant to enjoy the comfort offered by these high standards of insulation, often feel deprived of their right to fresh air and miss the opportunity of opening the windows according to their own desires.

Embodied Climate Knowledge

My parents rarely use the aircon. They just open the windows all day. To be honest, our air-conditioning system is not very good because I bought a cheap brand. The room never really gets warm. In summer, we use the aircon for cooling, but in winter it is not as useful. My parents tell me, I just have to wear more clothes. They think summer is arduous, but they really enjoy it when winter's on the way and it is getting cooler! (Wang Changshu, interior designer, 35 years old, Chongqing, December 2017)

- 23 Like Changshu and her parents, many Chongqing people complain about the summer heat. It makes urban residents feel exhausted more easily, especially those who do physical work. At their worst, the hot and sticky summer conditions can have serious effects on the health of elderly and children, leading, for example, to heatstroke. Changshu resides in Shanghai, but from time to time spends some weeks in her hometown of Chongqing, where she stays in her parents' apartment. On entering this apartment, I immediately notice that windows are wide open and it feels as if the cold mist outside has also come to occupy the indoors. As in most Chinese apartments, I take off my shoes when entering – an act that I regret after a while when I realize how cold the tiled floor is as its chill begins to sneak into my body. It seems as if our bodies feel differently despite being exposed to the same temperature: while I cannot but focus on my almost frozen feet, Changshu seems indifferent to this coldness from below. She is wearing her feather down jacket and some padded indoor shoes and enthusiastically responds to my questions.
- 24 In Chongqing, many of my informants perceive winter temperatures as more comfortable than those in summer. They claim that simply by wearing more layers of clothes, one can feel warm. Even temperatures around 5°C are not considered severe when warmly dressed and moving around. Local food customs such as drinking hot tea or eating spicy food add to a feeling of thermal comfort. A typical example of how bodies were kept warm before electric devices became popular is the practice of using a foot bath (*tangjiao*). According to an informant, people used to put their feet into a bucket of warm water for 20-25 minutes, then took a shower and went to bed. This method helps to warm up the entire body because blood circulation is stimulated and warmth ascends from the feet to the entire torso. A similar warming procedure is used in another traditional technique, the “warming table” which is known in Japan as *kotatsu*²⁹. People in unheated apartments and rural houses customarily put a bowl containing hot coals under the table and then a thick blanket on the table, which hung down to the floor, trapping the heat. People sitting around the table could put their feet and legs under the blanket to warm them. Today this technique is rarely used and, if at all, the hot coal is replaced by a heating device (fig. 5).

Figure 5: Warming legs around an infrared-driven “cage heater” positioned under the table, December 2017.

© Madlen Kobi

- 25 In some apartments, the scarcity of heating devices is related to the socio-economic status of the inhabitants. This was the case in the three-bedroom apartment of 26-year-old design student Rose, who had grown up near Chongqing and chose an English name to interact with foreigners. I lived with her for a few weeks in an old six-storey building which had been built in the 1980s as part of a residential compound for employees of the Sichuan Academy of Fine Arts. Because many of these apartments are quite run down, students can afford to live there. In Rose's apartment, indoor temperatures in December 2017 and January 2018 ranged between 8°C and 15°C and whenever Rose was home, she would leave all the windows wide open. There is not actually much heat loss through open windows as houses are generally poorly insulated and the cold would also infiltrate through the thin walls and the single-glazed windows. Rose neither uses an air-conditioner in the heating mode nor an electric heater. In the evening, she simply fills her hot water bottle and puts it under her blanket before going to sleep. On very cold days, she switches on the electric blanket for the same reason: to warm her bed before creeping in, turning the blanket off as soon as she is lying down. Often when she was at home, she would hide in her bed, commenting: "It's warmest in bed. And when I am in bed, I always get tired and want to sleep. Ah, I am dreaming of underfloor heating! If I have money one day, I will consider installing a system³⁰." Rose went into a kind of hibernation on cold days and she rarely left her bedroom, often only to go to the toilet or get some food from the kitchen.
- 26 Due to the electrification of urban areas since the 1990s and the relatively low energy prices, many middle-class residents in Chongqing now use air-conditioning in the heating mode or other heating devices to make themselves comfortable. The means used provide different kinds of comfort, as an engineer from Shanghai remarked:
- It makes a difference whether we use a radiator, underfloor heating or air-conditioning unit. If we use the air-conditioning in the heating mode, we only

produce hot air. It might be comfortable to sit in front of the unit where the hot air streams out, but this heat is only temporary. The walls remain cold and so does the room. A radiator provides more comfort³¹.

- 27 Any room heated in this way thus rapidly cools down again due to the insufficient insulation. Thermal practices are a reaction to the existing architectural structure defined by professionals such as architects, engineers or construction companies. The materiality of a building as well as the social context and aspects such as eating habits, sociality or sleeping patterns interact and interfere with notions of “thermal delight”³². However, many heating practices focus on selectively warming individual bodies or selected spaces rather than echoing the approach used in summer, when it is more common to cool entire rooms. Only a few consider the purchase of electric underfloor heating systems for their apartments due to the high costs of installation, running and maintenance. Nevertheless, electrification and affordable electricity have changed thermal practices in both winter and summer. While the air-conditioner is now indispensable for summer climate control, cooling used to be achieved with non-electrical objects – such as bamboo mats. Three decades ago, it was common in the evening for people to bring these mats onto their rooftops where they enjoyed sleeping in the slightly cooler night temperatures. Today, it is the elderly or those people who appreciate traditional objects who still make use of such bamboo mats to cover their beds or sofas.

The Body in an Urban Landscape Approach

- 28 Ethnographic data from Chongqing indicates that people do not just pass time “indoors” or “outdoors”, but that they move through a diversity of adjoined microclimates³³. The microclimatic sensitivity of my informants in winter goes beyond clothing. Within an apartment, different rooms can have different temperatures and different activities demand different forms of warming. Further, the available economic means determine the type of device and the duration of use. In order to save on energy costs, one informant, for instance, decided to use his larger sleeping room with beneficial ventilation conditions in summer and a smaller room in winter, the small size of which allowed him to warm it up easily with an electric heater. Such partial conditioning of indoor spaces is also common in summer, when often only the main room is being cooled. These different thermal spaces indoors exist in parallel and have to be analysed in a gradation to outdoor climates. In everyday life, people constantly move between spaces within and outside of buildings. In the course of a day, my informants pass through different microclimates. A winter day may start off warm in bed under a thick blanket in a rather cool apartment. After overcoming the difficulty of leaving this warm nest, some informants may hastily leave their houses, while others switch on the air-conditioner and sit in front of it during breakfast. Stepping out of the house to go to work does not connote stepping into the cold, as temperatures are similar to those indoors. In fact, the bodily movement stimulates blood circulation and one feels warm when walking to the bus stop. Buses and public transport are not heated as in many European cities, but through the gathering of bodies such enclosed spaces do warm up. Thermal conditions in the workplace vary considerably. Where institutions can afford it, offices are heated – as, for instance, in the publicly funded offices of some of my colleagues at Chongqing University.

- 29 Far from consisting of a uniform climatic landscape, the city thus offers a range of thermal nuances. In summer, residents avoid hanging out in concreted spaces on the street or use parasols that protect their bodies from the hot sun. In both urban planners' toolboxes and residents' everyday use, green spaces are central for mitigating the tougher aspects of urban climates. Parks, rooftop gardens and greening of residential compounds all contribute to people's mental and physical wellbeing. In Eling Park, for example, the sumptuous greenery and a small fish pond, as well as the park's location on a hill, guarantee lower temperatures than in large open squares. Green spaces in residential compounds (*xiaoqu*) also play an important role in urban microclimate regulation in China. My informant Melanie, a 41-year-old English teacher, observed that "green spaces are extremely comfortable. In the evening, when I return to my compound, which is very green, it is a few degrees cooler there. You can sense this difference³⁴". The thermal situation within semi-public residential compounds is often pleasanter than in public spaces, such as along main roads (fig. 6). Compared to other cities where only wealthier districts benefit from green infrastructures, such a clear-cut intersection of greening and income is not the case in Chongqing. Green landscapes do not mark particularly wealthy neighbourhoods, despite upper middle- and upper-class residents benefitting from larger investments in residential compound greening. At the same time, lower-class residents often practice urban gardening on their rooftops or in other available outdoor spaces. Different socio-economic groups thus have different means to create and enjoy green urban landscapes; however, none of them seems deprived of it.

Figure 6: The greening of fenced residential compounds in Chongqing improves the thermal wellbeing of its inhabitants, August 2017.

© Madlen Kobi

- 30 Thinking the urban through landscape³⁵ has implications for approaching city climates. As all landscapes to a greater or lesser degree are anthropogenic artefacts, they cannot be figured outside of the context of their emergence. An analysis of the materiality of

urban landscapes in Chongqing refers to their intricate relation with social, environmental and political developments. Comparing the facades of apartment buildings from the 1990s with those constructed since, for example, confirms the rising importance of the individually installed air-conditioning unit to control indoor climates. Furthermore, the reuse of former industrial buildings in the city centre – such as Testbed 2 creative park in a former printing factory on Eling Street – indicates the trend of displacing heavy industry to the outskirts due to its air-polluting effects. Beyond the built components of the cityscape, urban citizens shape the environment seasonally through the placement of their bodies. In winter, this concerns the retirees sitting at park tables, drinking tea and playing Mahjong, for instance; or the large number of people permanently wearing jackets, no matter whether they are outdoors or indoors. Also noteworthy is the ritual walk of the winter swimmers upstream along the banks of the Yangtze River, transforming the grey atmosphere into a sensuous winter experience (fig. 7).

Figure 7: Swimmers walking upstream along the Yangtze River where water temperature is around 16°C, December 2017.

© Madlen Kobi

- 31 Through the constant movement of people in urban spaces, the whole concept of hyper-conditioned environments becomes untenable as the indoors are never hermetically sealed from the outdoors; rather, the urban climatic landscape must be conceived as a continuum³⁶. Social practices align with the idea that indoors is a kind of “augmented climate”, as Requena-Ruiz terms the efforts of modern architects in the 1930s to 1950s to “coordinate artificial and natural climates instead of opposing them³⁷”. Boundaries between inside and outside vis-à-vis climatic characteristics thus constantly blur (fig. 8). The term “urban climatic landscape” should therefore be conceived more broadly than only including what is outside the houses. In order to think microclimates as interrelated, it should encompass the totality of the built environment, including parks as much as high-rises, bridges as much as streets, and

apartments as much as entire districts. Such a concept of urban climatic landscapes emphasizes the interconnectedness of different scales rather than promoting the idea that certain selected spaces are hyper-conditioned. This paper has aimed to make the reader aware of the diversity of thermal spaces used in everyday practices, which should sensitize a new generation of architects to conceptualize buildings not as detached entities but as within particular urban political ecologies. It is not enough to use climate as one of the input variables for simply calculating the u-value with software; architects have to engage thoroughly with the local urban climatic landscape to develop material structures that respond to specific contexts and their related social practices.

Figure 8: Indoor and outdoor temperatures are often the same in Chongqing – as in this snack bar with no door, December 2017.

© Madlen Kobi

Conclusion

- 32 The relationship of urban planners in China to the urban environment is ambiguous. On the one hand, realities in Chinese cities are forged by air pollution, heat and noise, different forms of solid waste deposits and water scarcity in the north. Construction and planning entities address the polluted and overheated urban climate with guidelines and practices for green and sustainable architecture. A 2007 report of the 17th National Congress of the Communist Party put forward the idea of an “ecological civilisation” (*shengtai wenming*) to address the need for rethinking the relationship between nature and human dwelling³⁸. On the other hand, a new environmental consciousness consists in the turn towards idealized human-nature relations manifesting in landscape design, such as the concept of a “*Shanshui City*” (mountain and water city) from architect Ma Qingyuan (MAD architects) or the “designed ecologies” of Yu Kongjian (Turenscape)³⁹. Ma proposes to develop ecological ways of

addressing the emotional and spiritual relationship between humans and nature through the urban built environment⁴⁰. In his landscape architecture, Yu has developed an approach that provides ecological solutions to the rapid urbanization in China. Instead of greening being used for ornamental and decorative purposes, he posits an appreciation of the beauty of weeds and designs urban landscapes that contribute to ecological restoration⁴¹. Both architects intend to bring together “nature” and “the city” in and through their designed landscapes. Yet, such projects are mere drops in the ocean of an increasingly polluted urban environment in China – one that challenges people’s wellbeing more and more.

33 While landscape architecture intends to mitigate urban climate through planning the outdoors, architects and engineers are more concerned with providing comfortable indoor spaces. However, in everyday reality the boundary between indoors and outdoors is not so clear-cut. Contrary to the omnipresent discourse in architecture and building science that urbanites tend to live in hyper-conditioned environments, my ethnographic data from subtropical Chongqing shows a more nuanced picture. Local thermal practices evolve along different scales of microclimates. Hyper-conditioned environments are neither inherent to the materiality of buildings, which are insufficiently insulated, nor to the ideas that people have concerning the creation of a thermally pleasant living environment. Warming or cooling strategies are frequently directed towards partial spaces such as rooms or even just towards individual bodies rather than an overall indoors. What is more, rooms are used seasonally: in summer, a weak form of hyper-conditioning indoors can be observed when people prefer to move between artificially cooled capsules. Air-conditioning, which has spread in tandem with the global construction industry, is also hyper-present in Chongqing. In winter, though, it is more an idea of permeability through ventilation practices that typifies the ways in which people cope with the cool subtropical temperatures.

34 Efforts to create thermally comfortable places in Chongqing show that if we want to understand the climate responsiveness of architecture, it is not enough just to consider the built structure of the house, which is often the focus of architecture-oriented studies. Factors such as the national political economy, topography or residential customs also determine the materiality of buildings. In addition, we have to consider the social practices and embodied climate knowledge of the users of architecture. This contributes to understanding everyday thermal comfort as embedded in nuanced urban climatic landscapes. The body is not only a sensorial instrument for perceiving thermal characteristics – it stands in constant dialogue with its urban environment:

The body and its environment, rather, produce each other as forms of the hyperreal, as modes of simulation which have overtaken and transformed whatever reality each may have had into the image of the other⁴².

35 Tracing the bodily movements of my informants in winter shows that they proceed through a sequence of thermal spaces during their everyday lives. We can no longer conceive the urban climate as one that is exposed to the elements as opposed to the artificial shelter of indoors; rather following individual bodies indicates that their everyday life takes place along a continuum of different scales of an urban climatic landscape.

36 **Acknowledgments**

This article is based on ethnographic fieldwork carried out in 2017 and 2018, which was funded by the Swiss National Science Foundation (Grant 157397). The author would like

to thank Sascha Roesler for enriching discussions on urban climates as evolving on a continuum between indoors and outdoors, an argument that I ethnographically engage with in this article. In addition, the author is particularly grateful to the referees of *Les Cahiers de la recherche architecturale, urbaine et paysagère* for their generous and incisive comments that substantially improved the arguments found herein. Any errors or omissions remain my own responsibility.

BIBLIOGRAPHY

- Marsha E. Ackermann, *Cool Comfort. America's Romance with Air-Conditioning*, Washington, DC, Smithsonian Institution Press, 2002.
- John Beardsley, "Popular Aesthetics, Public History", in William S. Saunders (ed.), *Designed Ecologies. The Landscape Architecture of Kongjian Yu*, Basel, Birkhäuser, 2012.
- Jiat-Hwee Chang, "Thermal Comfort and Climatic Design in the Tropics: An Historical Critique", *The Journal of Architecture*, 21, n°8, 2016.
- Julie Cupples, Victoria Guyatt and Jamie Pearce, "'Put on a Jacket, You Wuss': Cultural Identities, Home Heating, and Air Pollution in Christchurch, New Zealand", *Environment and Planning A*, 39, 2007.
- Gailius Draugelis and Shawna Fei Li, "Energy Efficiency in Buildings", in Axel Bäuml, Ede Ijjasz-Vasquez, and Shomik Mehndiratta (eds.), *Sustainable Low-Carbon City Development in China*, Washington DC, The World Bank, 2012.
- J. Fergus Nicol and Susan Roaf, "Rethinking Thermal Comfort", *Building Research & Information*, 45, n°7, 2017.
- John Fernandez, "Materials and Construction for Low-Energy Buildings in China", in Leon Glicksman and Jintow Lin (eds.), *Sustainable Urban Housing in China. Principles and Case Studies for Low-Energy Design*, Dordrecht, Springer, 2006.
- Mareile Flitsch, *On Human Skill. Anthropological Perspectives on a New Appreciation of Practical Knowledge*, Zürich, Völkerkundemuseum der Universität Zürich, 2014.
- Leon Glicksman, Leslie Norford, and Lara Greden, "China - Environment and Culture", in Leon Glicksman and Jintow Lin (eds.), *Sustainable Urban Housing in China. Principles and Case Studies for Low-Energy Design*, Dordrecht, Springer, 2006.
- Elizabeth Grosz, "Bodies-Cities", in Heidi J. Nast and Steve Pile (eds.), *Places Through the Body*, London, Routledge, 1998.
- Mette Halskov Hansen, Hongtao Li and Rune Svarverud, "Ecological Civilization: Interpreting the Chinese Past, Projecting the Global Future", *Global Environmental Change*, 53, 2018.
- Stephen Healy, "Air-Conditioning and the 'Homogenization' of People and Built Environments", *Building Research & Information*, 36, n°4, 2008.
- Lisa Heschong, *Thermal Delight in Architecture*, Cambridge MA, MIT Press, 1979.

Russell Hitchings and Shun Jun Lee, "Air Conditioning and the Material Culture of Routine Human Encasement. The Case of Young People in Contemporary Singapore", *Journal of Material Culture*, 13, n°3, 2008.

Russell Hitchings, Gordon Waite, Kate Roggeveen and Catherine Chisholm, "Winter Cold in a Summer Place: Perceived Norms of Seasonal Adaptation and Cultures of Home Heating in Australia", *Energy Research & Social Science*, 8, 2015.

Eva Horn, "Air Conditioning: Taming the Climate as a Dream of Civilization", in James Graham (ed.), *Climates: Architecture and the Planetary Imaginary*, Zürich, Lars Müller Publishers, 2016.

Heid Jerstad, "Damp Bodies and Smoky Firewood: Material Weather and Livelihood in Rural Himachal Pradesh", *Forum for Development Studies*, 41, n°3, 2014.

Tian Jing and Tiejun Zhou, "Study on Chongqing Traditional Architecture Based on Environmental Adaptability: Comparing Zhongshan Traditional Architecture with Contemporary Architecture", (Architectural Culture), 2015.

Setha Low, "Placemaking and Embodied Space", in Arijit Sen and Lisa Silverman (eds.), *Making Place. Space and Embodiment in the City*, Bloomington, Indiana University Press, 2014.

Xiaobo Luo and Weisheng Li, "Scale Effect Analysis of the Relationship Between Urban Heat Island and Impact Factors: Case Study in Chongqing", *Journal of Applied Remote Sensing*, 8, 2014.

Yansong Ma and MAD Architects, *Shanshui City*, Zürich, Lars Müller, 2015.

Michael A. McNeil and Virginie E. Letschert, "Future Air Conditioning Energy Consumption in Developing Countries and What Can Be Done about It: The Potential of Efficiency in the Residential Sector", Lawrence Berkeley National Laboratory, 2008.

Philippe Rahm, *Météorologie des sentiments*, Paris, Les Petits matins, 2015.

Steve Rayner, "Weather and Climate in Everyday Life: Social Science Perspectives", in Vladimir Jankovic and Christina Barboza (eds.), *Weather, Local Knowledge and Everyday Life. Issues in Integrated Climate Studies*, Rio de Janeiro, MAST, 2009.

Ignacio Requena-Ruiz, "Building Artificial Climates. Thermal Control and Comfort in Modern Architecture (1930-1960)", *Ambiances* (Online), *Ambiance and History of Architecture: The Built Environment in Our Sensory Experience and Imagination*, 2016, [online] <http://ambiances.revues.org/801>

Sascha Roesler, "Heizen bei offenem Fenster. Architektur und Ökologie in Chinas urbanem Süden (Heating With the Windows Open. Architecture and Ecology in China's Urban South)", *Wbw - Werk, Bauen + Wohnen*, 32, n°7/8, 2018.

Sascha Roesler and Madlen Kobi (eds.), *The Urban Microclimate as Artifact. Towards an Architectural Theory of Thermal Diversity*, Basel, Birkhäuser, 2018.

Giulia C. Romano, "Strategies for Sustainable Development: Towards Green(Er) Chinese Cities?", *Asia Pacific Journal of Public Administration*, 36, n°3, 2014.

Marlyne Sahakian, *Keeping Cool in Southeast Asia. Energy Consumption and Urban Air-Conditioning*, Basingstoke, Palgrave Macmillan, 2014.

Theodore Schatzki, Theodore, "Materiality and Social Life", *Nature and Culture*, 5, n°2, 2010.

Elizabeth Shove, *Comfort, Cleanliness and Convenience. The Social Organization of Normality*, Oxford, Berg, 2003.

Elizabeth Shove, “Energy Transitions in Practice: The Case of Global Indoor Climate Change”, in Geert Verbong and Derk Loorbach (eds.), *Governing the Energy Transition. Reality, Illusion or Necessity?*, New York, Routledge, 2012.

Line Valdorff Madsen and Kirsten Gram-Hanssen, “Understanding Comfort and Senses in Social Practice Theory: Insights from a Danish Field Study”, *Energy Research & Social Science*, 29, 2017.

Charles Waldheim, *Landscape as Urbanism. A General Theory*, Princeton, Princeton University Press, 2016.

Grégoire Wallenborn and Harold Wilhite, “Rethinking Embodied Knowledge and Household Consumption”, *Energy Research & Social Science*, 1, 2014.

Harold Wilhite, “A Cross-Cultural Analysis of Household Energy Use Behaviour in Japan and Norway”, *Energy Policy*, 24, n°9, 1996.

NOTES

1. To guarantee anonymity, all personal names in this article have been changed.
2. Stephen Healy, “Air-Conditioning and the ‘Homogenization’ of People and Built Environments”, *Building Research & Information* 36, n°4, 2008, pp. 312–22.
3. Eva Horn, “Air Conditioning: Taming the Climate as a Dream of Civilization”, in James Graham (ed.), *Climates: Architecture and the Planetary Imaginary*, Zürich, Lars Müller Publishers, 2016, pp. 233–242.
4. E.g. Elizabeth Shove, “Energy Transitions in Practice: The Case of Global Indoor Climate Change”, in Geert Verbong and Derk Loorbach (eds.), *Governing the Energy Transition. Reality, Illusion or Necessity ?*, New York, Routledge, 2012, pp. 51–74 ; Jiat-Hwee Chang, “Thermal Comfort and Climatic Design in the Tropics: An Historical Critique”, *The Journal of Architecture* 21, n°8, 2016, pp. 1171–1202; J. Fergus Nicol and Susan Roaf, “Rethinking Thermal Comfort”, *Building Research & Information* 45, n°7, 2017, pp. 711–716.
5. E.g. Marsha E. Ackermann, *Cool Comfort. America’s Romance with Air-Conditioning*, Washington, DC, Smithsonian Institution Press, 2002; Russell Hitchings and Shun Jun Lee, “Air Conditioning and the Material Culture of Routine Human Encasement. The Case of Young People in Contemporary Singapore”, *Journal of Material Culture* 13, n°3, 2008, pp. 251–265; Marlyne Sahakian, *Keeping Cool in Southeast Asia. Energy Consumption and Urban Air-Conditioning*, Basingstoke, Palgrave Macmillan, 2014.
6. Julie Cupples, Victoria Guyatt and Jamie Pearce, “‘Put on a Jacket, You Wuss’: Cultural Identities, Home Heating, and Air Pollution in Christchurch, New Zealand”, *Environment and Planning A*, 39, 2007, pp. 2883–1898; Russell Hitchings, Gordon Waitt, Kate Roggeveen and Catherine Chisholm, “Winter Cold in a Summer Place: Perceived Norms of Seasonal Adaptation and Cultures of Home Heating in Australia”, *Energy Research & Social Science*, 8, 2015, pp. 162–172.
7. Philippe Rahm, *Météorologie des sentiments*, Paris, Les Petits matins, 2015; Heid Jerstad, “Damp Bodies and Smoky Firewood: Material Weather and Livelihood in Rural Himachal Pradesh”, *Forum for Development Studies*, 41, n°3, 2014, pp. 399–414.
8. Hitchings and Lee, *op. cit.*; Shove, *op. cit.*
9. e.g. Harold Wilhite, “A Cross-Cultural Analysis of Household Energy Use Behaviour in Japan and Norway”, *Energy Policy*, 24, n°9, 1996, pp. 795–803; Steve Rayner, “Weather and Climate in Everyday Life: Social Science Perspectives”, in Vladimir Jankovic and Christina Barboza (eds.), *Weather, Local Knowledge and Everyday Life. Issues in Integrated Climate Studies*, Rio de Janeiro, MAST, 2009, pp. 19–36.

10. Mareile Flitsch, *On Human Skill. Anthropological Perspectives on a New Appreciation of Practical Knowledge*. Zürich, Völkerkundemuseum der Universität Zürich, 2014, p. 13.
11. Line Valdorff Madsen and Kirsten Gram-Hanssen, "Understanding Comfort and Senses in Social Practice Theory: Insights from a Danish Field Study", *Energy Research & Social Science* 29, 2017, pp. 86-94.
12. Hitchings *et al.*, *op. cit.*
13. Similar research results are provided by Cupples *et al.* (*op. cit.*) for warming strategies in subtropical Christchurch (New Zealand) in winter.
14. Grégoire Wallenborn and Harold Wilhite, "Rethinking Embodied Knowledge and Household Consumption", *Energy Research & Social Science* 1, 2014, p. 57.
15. Theodore Schatzki, Theodore, "Materiality and Social Life", *Nature and Culture*, 5, n 2, 2010, pp. 123-149.
16. Lisa Heschong, *Thermal Delight in Architecture*, Cambridge MA, MIT Press, 1979, p. 44.
17. Elizabeth Shove, *Comfort, Cleanliness and Convenience. The Social Organization of Normality*, Oxford, Berg, 2003, pp. 32-33.
18. Setha Low, "Placemaking and Embodied Space", in Arijit Sen and Lisa Silverman (eds.), *Making Place. Space and Embodiment in the City*, Bloomington, Indiana University Press, 2014, p. 41.
19. Elizabeth Grosz, "Bodies-Cities", in Heidi J. Nast and Steve Pile (eds.), *Places Through the Body*, London, Routledge, 1998, pp. 42-51.
20. In Chinese: 受不了也要受 [*shoubuliao ye yao shou*].
21. Xiaobo Luo and Weisheng Li, "Scale Effect Analysis of the Relationship Between Urban Heat Island and Impact Factors: Case Study in Chongqing", *Journal of Applied Remote Sensing*, 8, 2014, p. 5.
22. The percentage of Chinese households owning an air-conditioning unit rose from less than 1% in 1990 to 62% in 2003. Michael A. McNeil and Virginie E. Letschert, "Future Air Conditioning Energy Consumption in Developing Countries and What Can Be Done about It : The Potential of Efficiency in the Residential Sector", *Lawrence Berkeley National Laboratory*, 2008.
23. 田 静Jing and 铁军Tiejun 周Zhou, "重庆传统建筑环境摄影性研究——中山古镇传统建筑与当代建筑对比分析 / Study on Chongqing Traditional Architecture Based on Environmental Adaptability: Comparing Zhongshan Traditional Architecture with Contemporary Architecture", *建筑文化 Architectural Culture*, 2015, pp. 154-158.
24. Gailius Draugelis and Shawna Fei Li, "Energy Efficiency in Buildings", in Axel Bäuml, Ede Ijjasz-Vasquez, and Shomik Mehndiratta (eds.), *Sustainable Low-Carbon City Development in China*, Washington DC, The World Bank, 2012, p. 182; Sascha Roesler, "Heizen bei offenem Fenster. Architektur und Ökologie in Chinas urbanem Süden (Heating With the Windows Open. Architecture and Ecology in China's Urban South)", *Werk, Bauen + Wohnen*, 32, n°7/8, 2018, pp. 28-32.
25. Giulia C. Romano, "Strategies for Sustainable Development: Towards Green(Er) Chinese Cities?", *Asia Pacific Journal of Public Administration* 36, n°3, 2014, pp. 233-247; Glicksman, Leon, Leslie Norford, and Lara Greden, "China - Environment and Culture", in Leon Glicksman and Juintow Lin (eds.), *Sustainable Urban Housing in China. Principles and Case Studies for Low-Energy Design*, Dordrecht, Springer, 2006, pp. 8-22; John Fernandez, "Materials and Construction for Low-Energy Buildings in China", in Leon Glicksman and Juintow Lin (eds.), *Sustainable Urban Housing in China. Principles and Case Studies for Low-Energy Design*, Dordrecht, Springer, 2006, pp. 44-74.
26. 只要有风就舒服 (*Zhi yao you feng jiu shufu*).
27. Tian and Zhou, *op. cit.*, p. 156.
28. Fieldwork conversation, September 2017.
29. Wilhite *et al.*, *op. cit.*, p. 797.
30. Fieldwork conversation, December 2017.
31. Fieldwork conversation, December 2017

32. Heschong, *op. cit.*
33. Sascha Roesler and Madlen Kobi (eds.), *The Urban Microclimate as Artifact. Towards an Architectural Theory of Thermal Diversity*, Basel, Birkhäuser, 2018.
34. Fieldwork conversation, September 2017.
35. Charles Waldheim, *Landscape as Urbanism. A General Theory*, Princeton, Princeton University Press, 2016.
36. Roesler, *op. cit.*
37. Ignacio Requena-Ruiz, "Building Artificial Climates. Thermal Control and Comfort in Modern Architecture (1930-1960)", *Ambiances (Online), Ambiance and History of Architecture: The Built Environment in Our Sensory Expérience and Imagination*, 2016, [online] <http://ambiances.revues.org/801>
38. Mette Halskov Hansen, Hongtao Li and Rune Svarverud, "Ecological Civilization: Interpreting the Chinese Past, Projecting the Global Future", *Global Environmental Change* 53, 2018, pp. 195-203.
39. *Shanshui* is translated as "Mountain and Water" and is a concept that includes the natural surroundings, inspired by traditional Chinese landscape paintings.
40. Yansong Ma and MAD Architects, *Shanshui City*, Zürich, Lars Müller, 2015
41. John Beardsley, "Popular Aesthetics, Public History", in William S. Saunders (ed.), *Designed Ecologies. The Landscape Architecture of Kongjian Yu*, Basel, Birkhäuser, 2012, pp. 10-19.
42. Grosz, *op.cit.*, p. 43.

ABSTRACTS

The practice of regulation of indoor climates has spread globally with the rise of modern architecture and has cemented the idea of an air-conditioned indoors as opposed to a non-controllable outdoors. The ethnographic data discussed here from the metropolis of Chongqing (southwest China) presents a more nuanced picture and encourages scrutiny of the notion of "hyper-conditioned environments". Local thermal practices are not clear-cut along the lines of indoors and outdoors; rather, everyday life takes place in a range of adjoined microclimates. Building upon the centrality of the body for perceiving thermal differences, this paper analyses the interaction of climate, landscape and architecture in an era where hyper-conditioned environments are taken for granted. The paper develops an argument for more place-based studies on how conditioning is conceived in specific contexts. In a highly urbanized setting such as Chongqing, it is not only local climatic characteristics (e.g. little wind or high humidity) that affect architecture. Further, the national political economy that promulgates poorly insulated houses or residential customs such as ventilation interfere in the warming or cooling of bodies. This paper aims to sensitize architects to conceptualizing buildings not as detached and controllable entities, but as part of urban climatic landscapes.

La régulation des climats intérieurs s'est largement diffusée avec l'essor de l'architecture moderne, imposant l'idée d'intérieurs climatisés opposés à des extérieurs non-contrôlables. Les données ethnographiques recueillies dans la métropole de Chongqing (au sud-ouest de la Chine) et présentées ici témoignent d'une réalité plus nuancée et engagent un réexamen critique de la notion d'« environnement hyper-conditionné ». Les pratiques thermiques locales ne distinguent pas si clairement les limites entre intérieur et extérieur, la vie quotidienne se déroulant au contraire dans une diversité de microclimats contigus. En s'appuyant sur la place centrale du

corps pour la perception des différences thermiques, cet article analyse l'interaction entre climat, paysage et architecture à une époque où les environnements hyper-conditionnés semblent être tenus pour acquis. L'article plaide pour la mise en place d'études situées sur la façon dont le conditionnement est conçu dans des contextes spécifiques. Dans un cadre hautement urbanisé comme celui de Chongqing, ce ne sont pas seulement les caractéristiques climatiques locales (comme le faible vent ou l'humidité élevée) qui affectent l'architecture. La politique économique nationale qui favorise la construction de maisons mal isolées, ou les habitudes résidentielles comme la ventilation, interfèrent également dans le réchauffement ou le rafraîchissement des corps. Cet article vise à sensibiliser les architectes à concevoir les bâtiments non pas comme des entités contrôlables dissociées de leur environnement, mais comme parties de paysages climatiques urbains spécifiques.

INDEX

Mots-clés: climat urbain, Chine, corps, espaces thermiques, pratique sociale

Keywords: urban climate, China, body, thermal spaces, social practice

AUTHOR

MADLEN KOBİ

Madlen Kobi is a postdoctoral researcher at the Academy of Architecture in Mendrisio, Switzerland (Università della Svizzera Italiana). She obtained her PhD from the Institute of Social Anthropology at the University of Berne in 2014, and subsequently worked as a postdoctoral researcher at the Ethnographic Museum, University of Zurich. Her research and teaching interests include urban anthropology, architectural anthropology and the anthropology of waste and infrastructure, with a regional focus on China. In her current research project, she is investigating thermal-material culture, climate-responsive architecture and heating infrastructure in residential spaces in Chongqing, China.

madlen.kobi@usi.ch

Madlen Kobi est post-doctorante à l'Académie d'architecture de Mendrisio, en Suisse (Università della Svizzera Italiana). Elle est docteure par l'Institut d'anthropologie sociale de l'Université de Berne en 2014 et a ensuite travaillé comme post-doctorante au Musée ethnographique de l'Université de Zürich. Ses travaux de recherche et d'enseignement portent sur l'anthropologie urbaine, l'anthropologie de l'architecture et l'anthropologie des déchets et des infrastructures, principalement en Chine. Dans le cadre de son projet de recherche actuel, elle étudie la culture matérielle thermique, l'adaptation de l'architecture au climat ainsi que les infrastructures de chauffage dans les espaces habités à Chongqing, en Chine.

madlen.kobi@usi.ch