



Kris De Decker

Kris De Decker is the author of Low-tech Magazine, an online publication that refuses to assume that every problem has a high-tech solution. He also writes for the Demand Centre at Lancaster University (UK), which researches energy demand in relation to social practices, material infrastructures, and institutional arrangements. Before the creation of Low-tech Magazine in 2007, De Decker was reporting on cutting-edge science and technology as a freelance journalist for newspapers and magazines. He was born in Belgium and lives in Spain.

Low-Tech Comfort: Heating People not Buildings

Thermal comfort in winter is typically provided by heating the entire volume of air in a room or building, and in summer by cooling it. In earlier times, our forebear's concept of heating was more localized: heating people, not places. They used radiant heat sources that warmed only certain parts of a room, creating micro-climates of comfort, and countering the resulting large temperature differences with insulating furniture, such as hooded chairs and folding screens. They also used additional, personal heating sources that warmed specific body parts. The understanding better the three types of (sensible) heat transfer: convection (the heating of air), conduction (heating through physical contact), and radiation (heating through electromagnetic waves) gives building designers effective tools with which to create buildings that run to a far greater extent on natural energy. In this talk it is argued that it would make a lot of sense to restore this old way of warming, especially since modern technology has made it so much more practical, safe and efficient to do so.



Roberto Lamberts

Professor of Civil Engineering in the Department of Civil Engineering, Federal University of Santa Catarina (Universidade Federal de Santa Catarina / UFSC), based in Florianópolis, Brazil, with a PhD from Leeds University, UK. He teaches and researches in the fields of heat and moisture transfer, building simulation, bioclimatology, thermal comfort and energy efficiency in buildings and has worked with a wide range of research sponsors in Brazil, including Eletrobras, Petrobras, FINEP, CNPq and CAPES. He is past president of Brazilian Association for Technology in the Built Environment and Brazilian Building Performance Simulation Association, and a board member of the Brazilian Council for Sustainable Construction and International Building Performance Association. He has published widely and is on the editorial board of *Ambiente Construido*, *E-mat*, and the *Habitarebook* series, as well as *Advances in Building Energy Research*.

Economic, social and culture experiences of thermal comfort from field studies in Brazil

This talk will outline the current socio-economic realities of life in Brazil and their implications on thermal comfort research and understanding. The development of a huge country with a wide range of diverse but mild climates from coastal to continental and high levels of social inequality brings challenges to regulating construction. A special focus of the talk will be on occupant's expectations across the housing and commercial building sectors, which are changing with the proliferation of air-conditioning. The historic lack of building regulations and the new developments for building energy labeling raises a key question: should Brazil follow international standards?

To support a discussion based on this scenario, field studies on thermal comfort from the Brazilian population will be presented together with the new standard being approved. However, there is still a long way to go for residential buildings, where little information has been documented all over the world about adaptation, preferences related to thermal histories, and occupant behaviors. The development of building regulations has to take thermal comfort preferences, habits and cultural experiences into account across all buildings typologies in order to prepare the Brazilian building stock for future climates within the constraints of often challenging economic conditions.