

**Outdoor thermal comfort in the hot arid climate:
The effect of socio-economic background and cultural differences**

Faisal Aljawabra, Bath University

This research aims to contribute to the understanding of the relationships between microclimate and human behaviour in open public spaces in hot arid climate.

The specific purposes of this study are: investigating the impact of the microclimate on the use of outdoor places in the hot arid climate; examining the mechanisms of adaptation with emphasis on the factors of psychological adaptation; exploring the influence of the users' socio-economic background on the use of outdoor places and perception of the thermal environment; discovering the influence of socio-cultural background of users on the use of outdoor place and ways of adaptation.

Field surveys included structured interviews with a standard questionnaire and observations of the human activities, along with microclimatic monitoring, carried out during winter and summer 2008 and 2009. Five case study sites were carefully selected in two different parts of the world (Marrakech in North Africa and Phoenix-Arizona in North America) to represent the difference in cultural backgrounds in a similar climatic context.

The initial results indicate that solar radiation influences the number of people and activities outdoors particularly in summer. People from different social backgrounds show different approaches to the use of outdoor space. Moreover, people from different cultures shows differences in the way of using outdoor space, particularly, the type and number of activities which eventually influence time spent there. Therefore, design is an important parameter that can significantly improve microclimatic conditions, which is critical in the specific climatic context. Understanding the requirement of users is crucial for a good design.