Light, Comfort and Joy

User experience of light and darkness in Swedish homes

Kiran Maini Gerhardsson

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Faculty opponent
Wendy A. Rogers
Department of Kinesiology & Community Health,
University of Illinois Urbana-Champaign, United States
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Light, comfort and joy: User experience of light and darkness in Swedish homes

**Abstract**

The thesis examines user experience and behaviour relating to lighting, luminaires and window openings during day and night, in Swedish homes. Applying a mixed methods strategy of inquiry, both quantitative and qualitative data were collected in the field and in a full-scale model of an apartment. The thesis has identified multiple motivations behind residents' lighting behaviour and choices, enablers and inhibitors to the desired conditions of light and darkness. The findings suggest that researchers and practitioners must consider the following key points, of which the first might seem obvious but still is not:

- user needs and experiences when developing new lighting technologies,
- wearable comfort when lighting systems involve body-worn devices,
- window openings need multiple layers for shading, daylight distribution and privacy control,
- rethinking what is looked upon as wasted light in the home.

The conclusion is that the physical environment can be more supportive of residents' need for a regular 24-hour exposure to light and darkness, and dwelling comfort. In Swedish homes, where residents choose and mount most of their luminaires, responsibility for home lighting also lies with housing developers and lighting producers. In future research, the scope of indoor residential lighting should be expanded to include its effect on the outdoor environment after daylight hours.

**Key words**

Residential, lighting, window openings, user experience, technology acceptance, mixed methods

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Kiran Maini Gerhardsson

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