Night and Day Image of Public Space

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Abstract

The perception of urban space is basically defined by the presence of building fabric, in particular by its architectural approach, form and spirit. Nevertheless, light phenomena can become a crucial factor in transforming the image of the city and its ambience. The daytime spatial clarity created by single sun-light source vanishes in the dark hours giving place to numerous private and public light sources, thus reproducing the public space in a different way.
Case studies in the pedestrian city area of Zurich are pointing at the diversity in space perception depending on lighting conditions, thereby elaborate proposals are drafted for a new night ambience based on coordination between public lighting and private phenomena as advertisement and shop window lighting. Deriving from the analysis of the initial urban frame, settings and functional lighting becomes a tool for creating the city image, revaluating space and regaining significance of architectural heritage.

Keywords:
public space, day and night perception, identity

The perception of public space is essentially formed by its diurnal image, on which basis the nocturnal space experience is developed.

Although the primary space characteristics of streets and places remain unchanged, day and night spaces possess different characteristics, caused by unequal lighting conditions. Due to solar radiation the diurnal space is clear and could be visually experienced as a whole. Depth and spatial coherence are easily detectable. Foreground, interspaces and background can be specified whereas both free area and volumes can be perceived.

Because of changed lighting conditions after sunset the continuity of urban space and its depth are disturbed, so that foreground and background can be easily mistaken. Mainly individual objects could be perceived; the overall urban view is missing. The night image of urban space remains incomplete and avails itself of the emblematic language of advertisement and the punctual feature of lighting sources which facilitate orientation.

Nevertheless, the night view of urban space cannot be separated from its day image. The ambivalent experience of the same space enriches the urban image and should be seen as a challenge in the planning.

An analysis of urban space with adequate proposals for its enhancement was elaborated for central destinations with prevailing pedestrian use in the city of Zurich. The linear wide spread Bahnhofstrasse and the irregular structures of the old city of Zurich were selected for this research.

Both are areas concerned by Plan Lumiere (Fig.1) and the Conception for advertisement facilities that were elaborated by the city of Zurich in 2004 and 2006. These ensure the control of private lighting inventions as facade illumination and luminous advertisement.

According to Plan Lumiere, illumination of monuments and buildings could be implemented only with permission by local authorities. Public private partnerships should stimulate the involvement of citizens in the implementation of the urban nightscape. Additionally the Conception for advertisement facilities controls the arrangement and dimensions of licensed advertisements. Regarding the research areas authorised advertisements should be situated only in the ground floor area, thus protecting facades from undesirable luminous facilities.

Bahnhofstrasse, the famous shopping avenue in Zurich, is defined by the buildings of finance and business institutions as well as shops. This 21m wide and 1,4km long

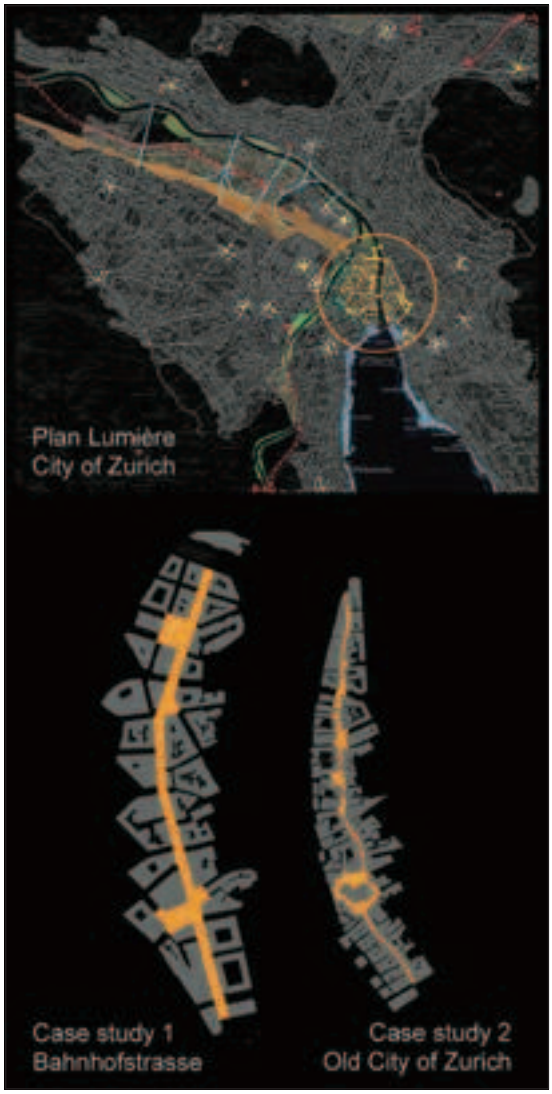

Fig. 1. Plan Lumiere and study area.

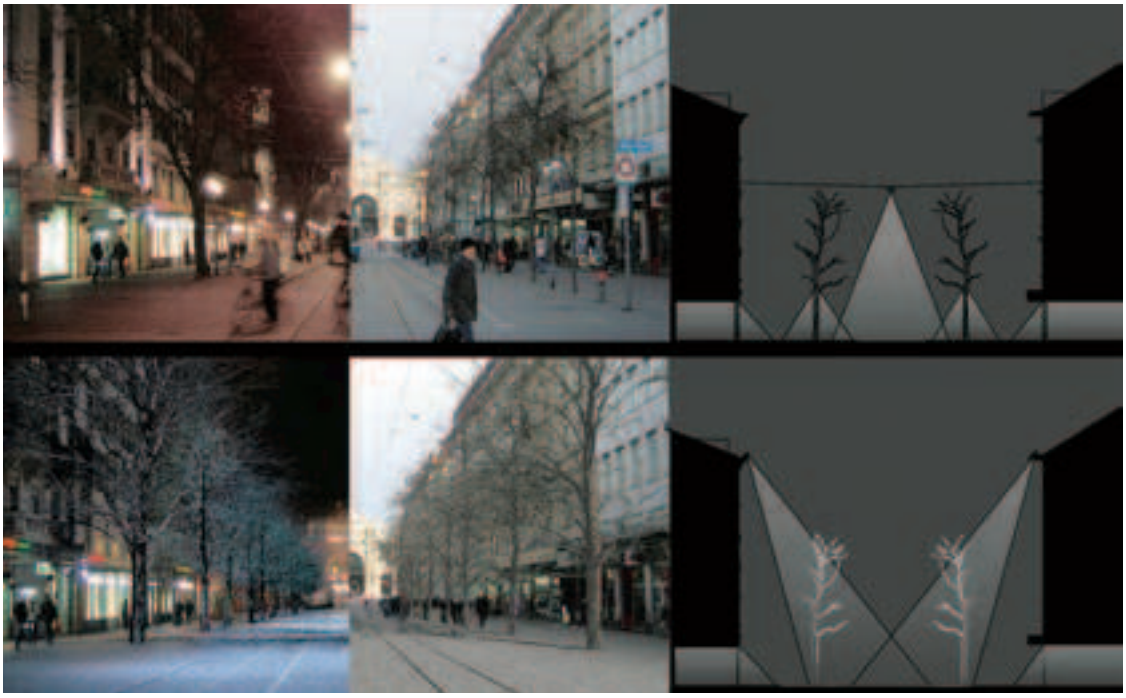

Fig. 2. Current situation (top) and lighting proposal (bottom) for Bahnhofstrasse.

Fig.3. Season orientated lighting proposals for Bahnhofstrasse.

street is mainly used by pedestrians and influenced by the presence of lime trees. In the evening this urban space receives a new appearance due to applied lighting equipment. Shop windows highlight the basements. Advertisements, adequate to the scale of space and controlled by local regulations, create the background of the avenue. Ball luminaires and suspended sodium lamps illuminate the space thus pointing out the functionality of lighting. A night ambience adequate to the use of space is not present. Beside the shop lights, the monotony of the wide avenue dominates the whole image.

By removing few private lights from the facades according to Plan lumiere, a controlled background will be created. Based on these phenomena, new identity of Bahnhofstrasse could be elaborated by staging spatial conditions and vegetation presence by night. The proposal plans the replacement of existing lighting equipment by lighting fixtures fixed on roofs, thus liberating space for pedestrian needs. The intentionally high placed lighting fixtures will illuminate the trees, creating light-shadow effects on the otherwise monotonous street area that occupies a significant part in the field of view. Lighting equipment and punctual lighting sources as element of urban space will fade, thus allowing an adequate rendering of predefined urban space (Fig. 2).

Equal lighting sources for the whole length of the street could emphasize the unity of space and by its changeable light colour will create season orientated solutions.

Fig.4. Randomized (top) and controlled (bottom) lighting situations in the Old city of Zurich.

Unique colour as unsaturated blue in the cold snowy days remind of frozen season orientated trees, in contrast to autumn spirit, expressed by warm orange light, focusing on yellow-brown tree foliage and converting public space into a scene of experience (Fig. 3). Blue or yellow do not appear colourful, as far as they are not used in combination with other colours. Analogous to day light conditions when the light temperature varies between ca. 2500 and 8000 K, the eye adapts to prevailing colour and perceive a white surface as white due to its white balance. Colour and implemented shadows play crucial role in creating a new night ambience.

Finally shop windows will maintain their significance for commercial needs, and additional revitalization by means of scenographical street lighting in the evening hours will enhance the identity of Bahnhofstrasse. Collaboration between private owners and public institutions can contribute to a balanced night ambience.

The second case study encompasses a part of the old city, namely Niederdorf and Oberdorfstrasse with their irregular narrow street character and different building heights. This passageway, as long as Bahnhofstrasse, is marked by the prevailing pubs and shops. Beside the architectural heritage and street pavement, day and night image are influenced by the presence of historical lanterns and configuration of shop windows.

The interaction of lantern and shop lights by night is in some cases balanced (Fig. 4 bottom), and in other requires a strict control of private lighting (Fig. 4 top), especially advertisement facilities.

According to the recommendations of the Conception for advertisement facilities advertisement should be placed in the basement level, thus being perceived in conjunction with shop windows and integrated in urban environments. Luminous characters are favoured over lighting slabs.

The case Old city does not demand radical modifications as Bahnhofstrasse, but moderate interventions, maintaining lantern lighting as guiding and historical element.

By controlling private lighting and accentuating on few preselected plazas, paths and monuments with historical value, an enhancement of public space by night could be achieved. Local conditions should be supported and reproduced by night.

References

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