International Conference

Shaping light for health and wellbeing in cities

Light also shapes urban spaces and social life, thus influencing people's behaviour, moods, and sense of security, as well as social relationships, easing or hampering socialisation and participation in civic life.

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Shaping light for health and wellbeing in cities

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INCLUSIVE ACCESSIBILITY H24. A REFLECTION ON THE URBAN PLANNING OF FRAIL PEOPLE

keywords
urban lighting, human-oriented lighting, urban accessibility, social inclusion, public space

ABSTRACT
The interest in public space as an attractor of human activities generally emerges during the day, when natural light reveals spaces and their characteristics and allows - or not - their use. Seen as a "borderline", the passage from day to night leads to the analysis of elements and strategies that allow everyone and, the most fragile people, to be able to experience the city in equal measure, guaranteeing well-being and safety.
This study aims to be a reflection on the theme of urban lighting for the benefit of the entire population, those who encounter obstacles that, inevitably, increase at night. Starting from the review of the literature on the subject, good lighting is here interpreted as a further opportunity for inclusion that supports well- being centered on the person as well as on the quality of the places to live.

INTRODUCTION
Public space has always been a symbol of well-being for the urban community and motivation of the customs that accompany people's daily lives. As catalysts of social interactions capable of generating and enhancing the sense of community [1], squares, parks, green areas, but also drosscapes and forgotten voids are places of living that should guarantee the meeting of the needs and rights of all users. Starting from this framework, the design and management of places to live open to social phenomena made up of relational networks, feelings, and gestural interactions between person and space and between person and person [2].
Meanwhile, the strategies advanced by the 2030 Agenda for Sustainable Development, specifically with Objective 11 "Making cities and human settlements inclusive, safe, long-lasting and sustainable", aim at rethinking urban spaces and places of being in order to make them inclusive, accessible, and safe for all. However, today we still are faced with few virtuous examples capable of recognizing and guaranteeing urban livability for the entire daily cycle. A 24 hours city, capable of ensuring use and safety - especially for the frailest people - becomes the reason and incentive for a renewed attention to the design of urban artificial lighting.
Urban planning and environmental accessibility, therefore, have to deal with an everyday life that is no longer confined to daytime life cycles, but which looks at the sunset as a "borderline" ready to break the day to give it a new beginning and mark the time of leisure, pleasure, and relaxation. In this sense, urban lighting becomes a design tool aimed at recovering the sense of places, getting back their identity, and restoring social justice especially to people placed "on the margins".
Rethinking the design and management of urban lighting according to a human-centered approach would therefore represent a fundamental starting point for creating adequate and safe conditions that allow everyone the positive use of open spaces after sunset while looking at the energy consumption and the design of the lighting fixtures.
The objective of this work precisely becomes that of broadening the vision of environmental accessibility, underlining the need to introduce in the planning processes a rethinking of artificial lighting as a mere "obstacle" to be overcome for the benefit of urban quality, equity, and social inclusion.

MATERIALS AND METHODS
The reflection on the subject has been conducted starting from the review of the scientific literature on the issues of environmental accessibility and the use of public space in a safe way h24.
Among the most important works, Casciani [3] contains a series of important considerations regarding the social dimension of urban lighting. In fact, enhancing the night-time urban

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experience contributes positively to the cognitive, and emotional perception of people in the urban environment itself. The study of Casciani and Musante [4], in particular, highlights how the lack or the presence of proper urban lighting can determine and condition human behavior creating more or less intimate and more or less safe atmospheres.
Another example of significant interest is that of Lauria [4] which allows us to summarize the need for lighting in "hidden" places to discourage the presence of infringements or abuses and therefore dampen feelings of insecurity and uncertainty.
Urban lighting influences the observer's emotions: these sensations are often linked more to the lighting than to the place itself since light contributes to the beautification of the space in which one is located and improves the experience of the city user [6]. And again, Davoundian states that good street lighting increases physical activity, encourages people to walk and supports correct spatial perception, promoting active aging and psychological well-being, especially for people with cognitive disabilities [7].
Finally, the ARUP study [8] underlines the importance of public lighting as a driver for improving the quality of life, with possible positive economic effects. To obtain good results in this sense, however, participatory processes are also necessary that allow us to understand what the needs of the community are. In this mood, the present study took into consideration different bibliographic references - GBC Quartieri v. 2015, ITACA Scala Urbana v. 2016, BREEAM Communities v. 2012, DGNB Districts v. 2020 -, highlighting how good lighting can positively contribute to the life of the urban community. Specifically, from the review of the aforementioned literature, the theme of lighting emerges not only as an element linked to energy consumption, but also as a strategy aimed at favoring the use of public space in safety and above all aimed at making urban systems more "attractive and qualifying".

RESULTS AND DISCUSSION

The quality of the urban space has direct repercussions on the inclusion, wellbeing, health, real and perceived safety of people. But how can lighting bring about an improvement in the quality of the environment?
Considering the optimal height of the light sources to avoid glare phenomena and rethinking the location and distribution to generate different "atmospheres" in the space and escape from the generation of shadow areas, the conscious design of lighting fixtures and their location open up to attention dedicated to guaranteeing the minimum levels of visual comfort.
According to the practical guides, lighting stands out, indeed, the need to differentiate the lighting devices according to the different urban spaces - squares, pedestrian paths, streets, gardens - to be illuminated in order to encourage life and social activities. The lighting fixture, be it a streetlamp, a bar, or a led, is not only a standard element of street furniture or a part of the functional infrastructure of the city but offers itself as an element capable of modifying the perception of a place during dark hours [9].
Paying particular attention to the most fragile categories of the community, the study recognizes in the correct design of urban lighting, the element for changing the perception of the city capable of establishing new psychological, emotional, and behavioral aspects for a new human and social layer. If it is true that a place can arouse a variety of social relationships between people and that these can vary from passive to active, it is right to consider how the predominant interactions and relationships take place, in fact, through the observation of people who avoid true eye contact but through a careful "look away". Therefore, the "ability of the eyes on the streets" becomes the emblematic measure of the social quality of space because it can indicate the possibilities that

people have to look at each other and to maintain a higher degree of security of the context, helping to make individuals less vulnerable [10]. "Universal observability" [3] thus becomes an invitation factor that encourages well-being centered on the person and the quality of places through materials, finishes, and elements of urban design.

CONCLUSION

From crowded streets to courtyards for public use, what emerges from the more and less recent scientific literature, leads to understanding the different qualities that make some spaces thrive compared to those that, in contrast, they tend to be less lived while remaining peculiar to their cultural value, their tradition and the history they represent. It is verifiable, indeed, how difficult it can be to find a perfect match between places of living and quality: some places of great quality - catalysts of values, customs, and heritage -, may inevitably be denied in the recognition of the identity of the person or group. It is in this sense that we are committed to planning to guarantee wellness and wellbeing and, therefore, to improve, one step at a time, the quality of life of the people who live in our cities.

Rethinking the design of urban space 24 hours a day, making urban lighting the protagonist of environmental planning, becomes an emblematic goal of a continuous and wishful search for equity and social justice aimed at (re) giving space to the frailest categories of citizens.

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Project Partners

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