



¿Is more light better security?

The Role of Public Lighting in Urban Safety and Fear Perception from a CPTED Perspective

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Germany

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ICA President



-
- There is perceived and objective safety in urban security.
 - For CPTED: **APPROPRIATE** Lighting means more safety.

An aerial photograph of a dense urban skyline, likely Chicago, featuring numerous skyscrapers and a large body of water (Lake Michigan) in the background under a cloudy sky. The text is overlaid in the center of the image.

A smart city must be safe,
both objectively and
subjectively...



CRIME AND URBAN VIOLENCE

CRIME

It is a complex phenomenon influenced by a large number of social and environmental variables.

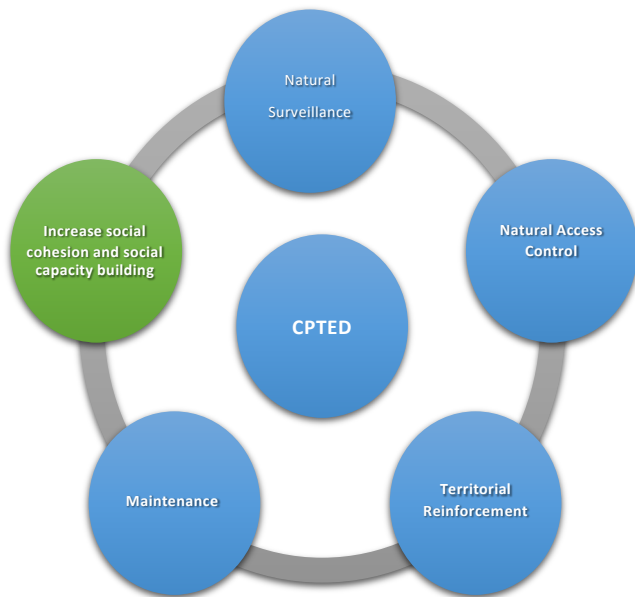
PREVENTION

Any strategy that seeks to reduce current levels of crime and perceptions of insecurity through actions that anticipate these phenomena.



CPTED is a set of crime prevention strategies designed to reduce opportunities for crime and reduce community fear by increasing community cohesion.

CPTED CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN



CPTED is more than 50 years old. It has evolved from first, second and third generation (ISO CPTED 22341) since 1972.

CPTED FIRST GENERATION

The first generation of CPTED is mainly focused on reducing criminal opportunities through the application of 4 basic principles, which are

- Natural surveillance
- Natural access control
- Territorial reinforcement
- Maintenance



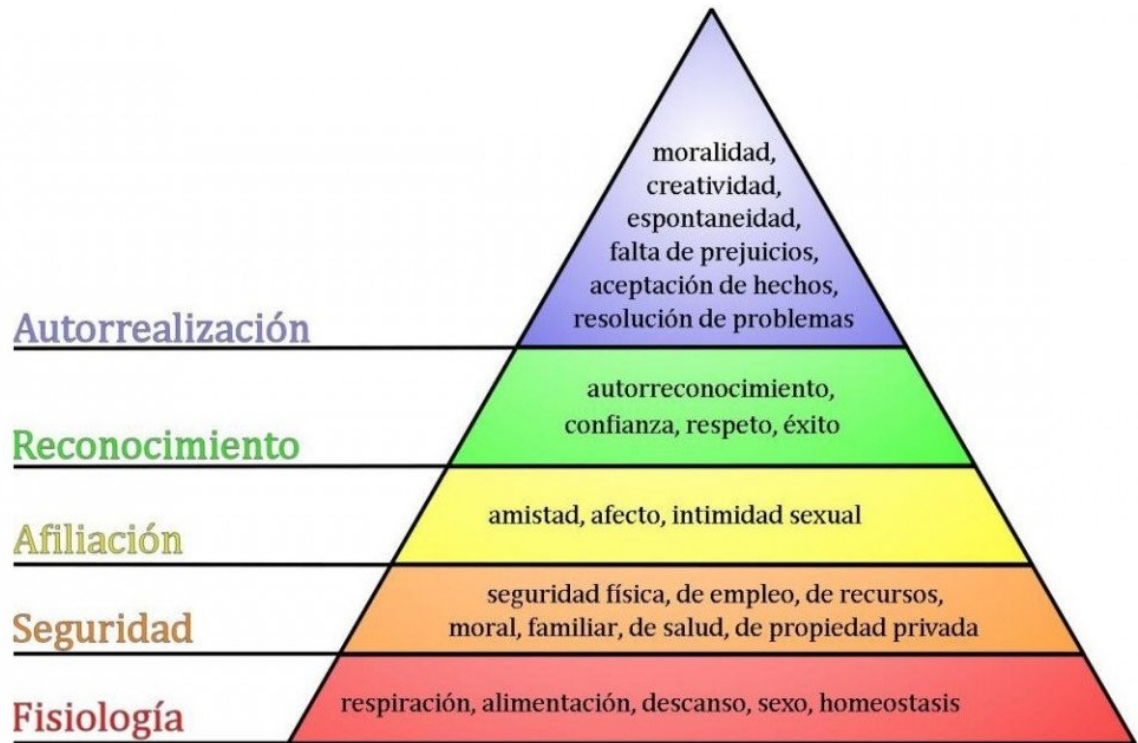
CPTED SECOND GENERATION

- The second generation of CPTED is an approach that integrates the social architecture of communities into intervention areas.
- A fifth principle is added to the previous four, namely community participation.



CPTED Third Generation

- Third generation CPTED extends both the situational approach of traditional CPTED and the social/neighbourhood ecology approach of second generation CPTED by creating a new theory that integrates human motivation, aspirations and needs into the concept of neighbourhood liveability.



ICA UMBRELLA INITIATIVE

The ICA Umbrella Initiative started in 2017 under Dr. Rau leadership as ICA President, and it is an ICA policy that seeks to articulate CPTED groups in an organic way globally.

CPTED groups can connect with ICA using MOU or affiliation letter.

The ICA Umbrella Initiative has been very successful and is expanding ICA and CPTED globally.



Crime against women

- Crime against women is one of the highest in the world and includes not only sexual assault, but also femicide and domestic violence.
- The CPTED (Crime Prevention Through Environmental Design) methodology has also developed concrete tools and interventions with groups of women of different ages.
- The CPTED (Crime Prevention Through Environmental Design) methodology has also developed concrete tools and interventions with different age groups.



Women's perception of insecurity

- The evidence shows that women's perceptions of urban insecurity are higher than men's.
- In Latin America and the Caribbean, there is more evidence of a relationship between urban lighting and a reduction in insecurity than there is for a reduction in crime.



PERCEPCIÓN AMBIENTAL
LUMINARIAS



La Cisterna Intermodal Project, Chile, 2022.

- The perception of insecurity of passers-by, especially women, from the Intermodal Station to the CISTERN in Chile is studied using the CPTED method.



ESCALA



MUY SEGURO

MUY INSEGURO

RESULTADO OBTENIDO POR ENCUESTA DE PRECEPCIÓN DE INSEGURIDAD
DESARROLLADA EN ABRIL-MAYO-JUNIO 2022

PERCEPCIÓN AMBIENTAL
CONSOLIDADA - MUJERES



Insecurity map and lights

- A spatial relationship between critical levels of fear and the absence of public lighting is observed in women and is also associated with the spatial condition of edge.



ESCALA



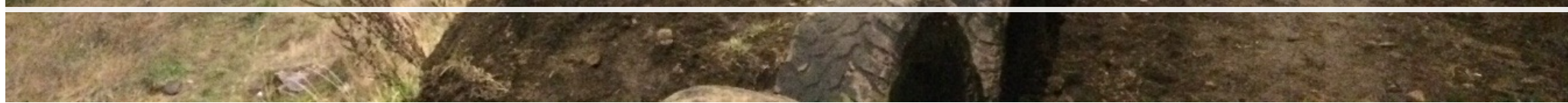
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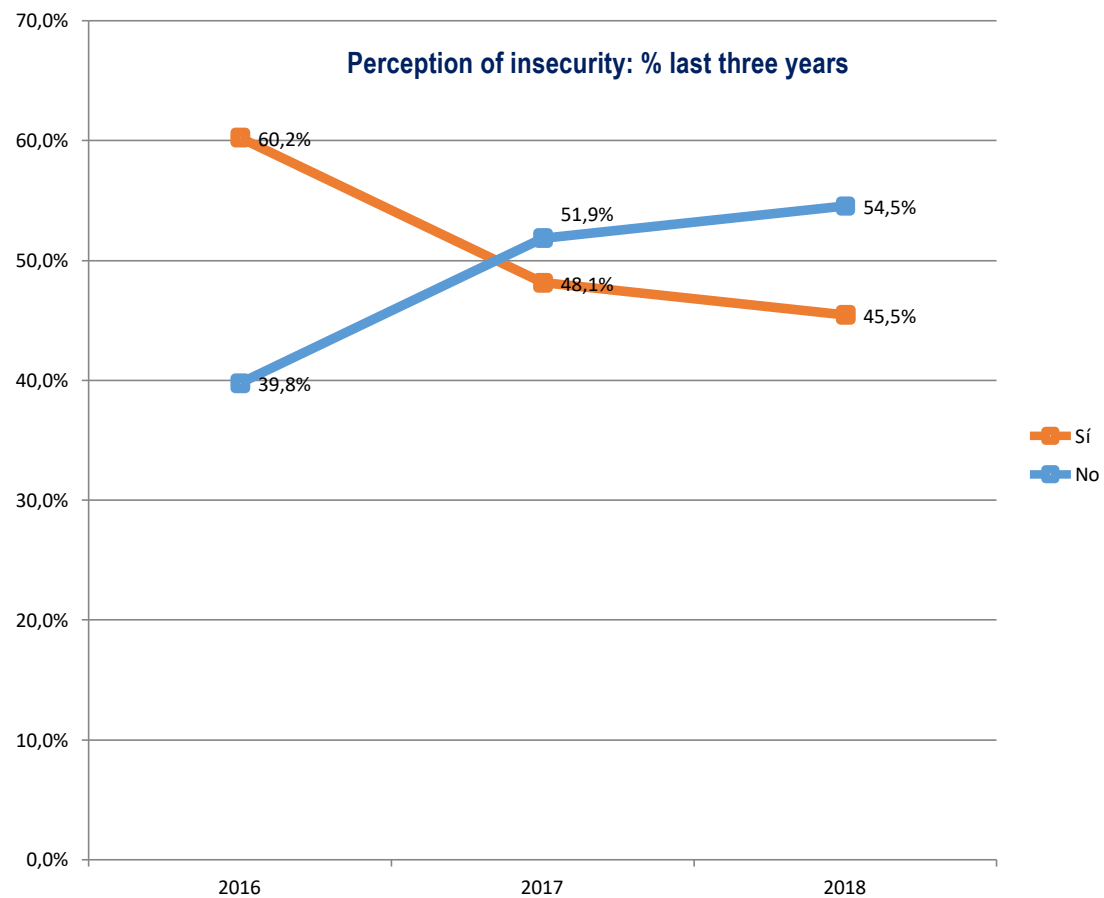
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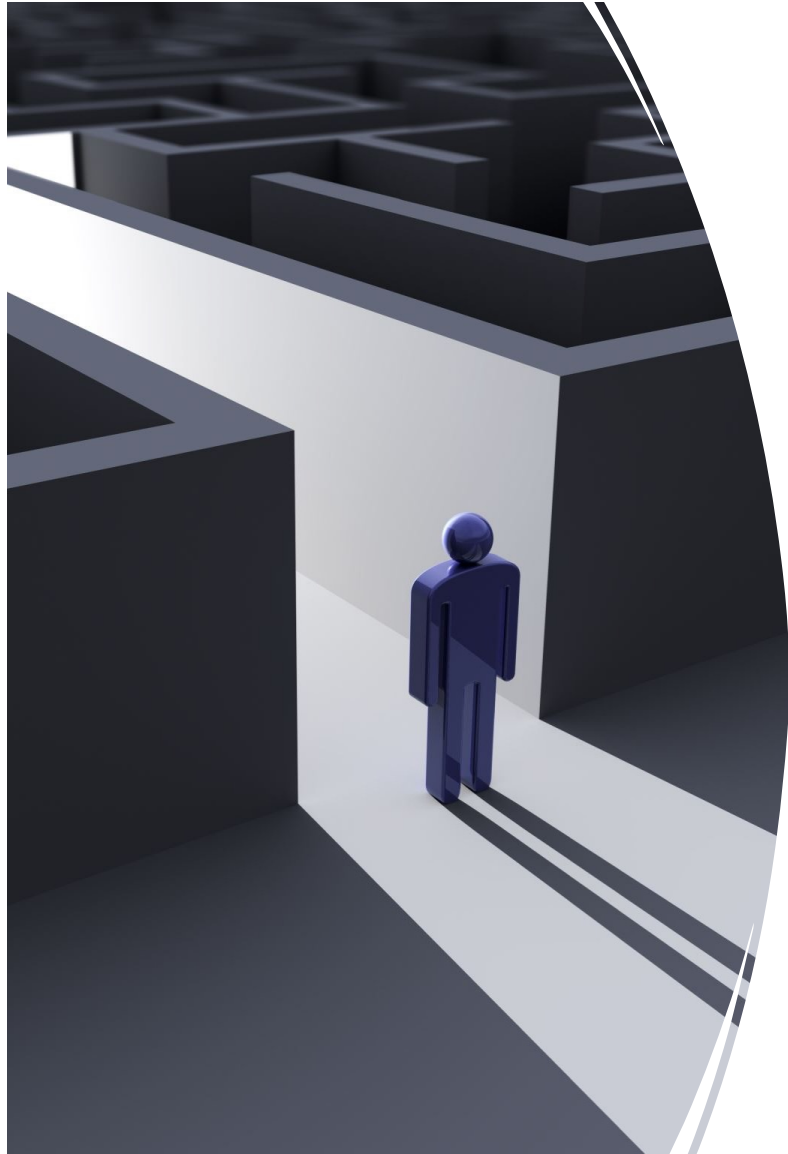


From 2016 to 2018, the ESU survey in Quebrada la Cruz, in Coyhaique, Chile, measured the perception of fear of neighbours before and after the installation of Safe Route lights.



The perception of insecurity in Quebrada La Cruz has been significantly reduced since the installation of the lights.





Dr. Randy Atlas Lighting White Paper

- “Lighting is neutral regarding changing or preventing behavior. It is similar to video surveillance. Video cameras does not stop crime, but can be an effective deterrent, if applied in the proper way to alter how persons perceive their space.”
- “Lighting does not call the police or scream for assistance! Lighting provides information on which to provide a choice, to make a decision or action step (flight or fight). Lighting provides users of the built environment the choice to move forward, retreat back, or stay put.
- “Lighting provides the choice to walk, run, or gather in a familiar area. Lighting also provides information for a predator, to see their next victim. Lighting provides the potential victim information about where predators may lay in wait, and how to steer clear of them” (Source: Atlas. Randy 2021)”



Dr. Randy Atlas Lighting White Paper

- It is important that security lighting, and CPTED for that matter, is now part of the strategy to protect critical infrastructure in USA. The Security Lighting Guide states, “The U.S. military and national security agencies throughout the world have long recognized the critical importance of security lighting to aid in the protection of their citizens, critical installations, and infrastructure...since the terrorist attacks on September 11, 2001, the number and types of facilities considered critical and receiving upgrades in security lighting have expanded to include such elements as bridges, tunnels, communication hubs, transportation transfer points, and international borders.” (P.2) (Source: Atlas. Randy 2021)”

Key Tenets of Security Lighting

Security lighting is installed to help protect people and property from criminal and terroristic activities, and to create a perception of a reasonably secure environment. To understand the principles of security lighting, it is necessary to consider key security tenets. (P. 6)

4.1 Responsibility

- In North America, the burden of security and safety is generally the responsibility of the individuals who have primary control over a given property. With the rights of control comes the responsibility of control. (P.6)

4.2 Anticipating the Threat

- Security lighting's principal effect on crime is to affect behavior of would-be criminals.

4.3 Time

- Time is the criminal's enemy. The longer a criminal act takes in planning, execution, and escape, the more likely it is that the criminal will be captured.

4.4 Target Hardening

- Light can harden a target in a public space so that the perpetrator decides not to attack (deterrence).

4.5 Fight or Flight

- The basic decision made by persons when threatened is often called fight or flight. Properly installed and maintained lighting can play an important role in helping people make this basic decision in an accurate and timely manner. (P.7)

4.6 Security Elements

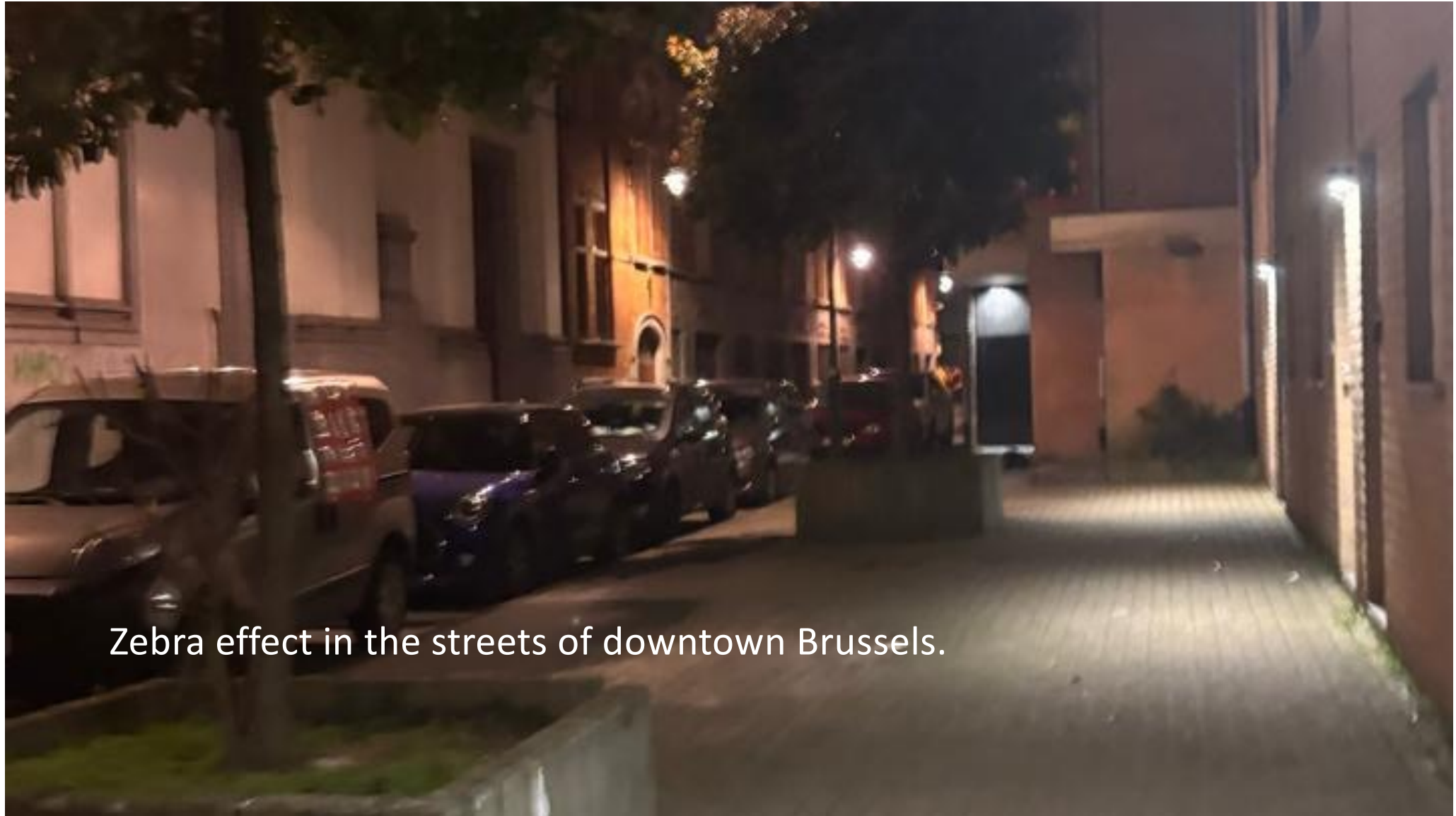
- Security elements can be active or passive deterrents.



Safety Audit night march in Brussels

- I went on a reconnaissance walk at night in the centre of Brussels and, as a "woman thermometer", I noticed that the lighting levels in the historic centre were adequate, but not in the residential areas.
- It was very lonely and the zebra effect of light appeared on the streets with reduced visual fields that increases my fear perception.





Zebra effect in the streets of downtown Brussels.



Light without human presence

- For pedestrians, especially women, to feel safe, it is very important not only to have lighting, but also to have eyes on the street, as Jane Jacobs suggested.
- For women in particular, it is very important to have the eyes of other women on the road in addition to the presence of lighting.



In Guadalupe, Mexico, in 2021, women prefer to be seen by other women (murals), with lighting, pedestrian crossings and games for children.

CPTED Guide for Women

App Academia
<https://academia.edu/resource/work/107250584>



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Conclusions

- More light means more safety, if it is the right lighting to respond to an urban safety diagnosis aimed at a specific population group with defined characteristics.
- Lighting must be a variable that is better articulated with other relevant variables of safe urban design.
- It is always advisable to carry out an evaluation of the results or impact of an urban lighting project.
- Women are the best urban termometers for lighting CPTED interventions.



Thanks!!!!!!!!!!!!

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