



## A REVIEW ON DESIGNING A NEIGHBORHOOD CENTER TO ENHANCE THE SECURITY OF URBAN DECAY WITH THE CPTED APPROACH

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### **Abstract:**

The CPTED approach is a targeted approach to the efficient and intelligent design of environmental components by employing an optimal artifact environment in reducing crime which has a significant impact on increasing social capital, improving the quality of life, and increasing citizenship satisfaction and thereby improving social welfare. New environmental design approaches emphasize that with regard to the physical structure of urban spaces and the formulation and application of special rules in them, a large amount of crime can be prevented from urban crime, in which this can be achieved by reducing the natural potential of urban areas in crime or crime. Accordingly, in this research, by considering the importance of neighborhood centers in cities and providing security in these spaces we, utilizing available resources and analytical and documentary approaches, intend to provide solutions, executive practices and universally valid principles in urban environments for improving security in them using the CPTED approach. The results of the research indicate that it is very necessary to use the CPTED guidelines and principles in neighborhood center design to increase security, and can lead to positive results. Therefore, at the end of the research, there are presented solutions for urban design and architecture of the neighborhood center that applying them to the design process and the construction and implementation can reduce the capacity of the regions to organize and form a safe neighborhood center.

**Keywords:** security, CPTED, neighborhood center, urban crime, environmental design

### **1. Introduction**

One of the basic needs of man is the release of fear and threat or, in other words, "security". Accordingly, security in urban spaces is also one of the major issues in the

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design of modern cities. Designers are trying to provide areas for enhancing security in urban spaces through designing spaces and planning appropriate urban uses. In this regard, the crime prevention through environmental design (CPTED) approach in designing and planning the environment and the urban landscape, which seeks to adhere to the specific standards in the construction and physical environment, to promote the safety of the city and thereby help the residents feel safe.

The concept of security has two dimensions: mental and objective so that statistics on crimes committed in a neighborhood do not fully match the level of security of the residents. Feeling safe as a mental affair is influenced by various social and psychological factors; therefore, it seems that the task of environmental designers is not limited to upgrading physical standards to increase safety and security, rather, it is necessary for citizens to improve the level of psychological well-being, to intervene directly in the process of perceiving security by residents in order to increase their sense of security.

In this regard, the CPTED approach can be considered as a kind of targeted approach for the efficient and intelligent design of environmental components by employing an optimal artifact environment for reducing crime that effectively, increasing social capital, improving the quality of life, and increasing the level of citizenship satisfaction, as well as improving social welfare. There is a general consensus that the CPTED approach can be effective in both real-life reduction of crime in urban environments on the one hand, and increased a sense of safety and space security.

New environmental design approaches emphasize that, given the physical structure of urban spaces and the formulation and application of special rules in them, a large amount of crime can be prevented from the urban crime that this can be achieved by reducing the natural potential of urban areas in crime or crime. In this research, by considering the importance of neighborhood centers in cities and providing security in these spaces we, utilizing available resources and analytical and documentary approaches, intend to provide solutions, executive practices and universally valid principles in urban environments for improving security in them using the CPTED approach.

## **2. Neighborhood concept**

In general, the concept of the neighborhood can be defined from a variety of social, mental, perceptual, physical and political dimensions. Each of the different dimensions provides their own definitions of the neighborhood. On the other hand, these definitions can vary in societies and at different times. From the Lynch neighborhood point of view, it is a vast region that is recognizable by virtue of some common characteristics. Neighborhood with a specific wall, a specific way and boundaries, socially, with the perception of local residents, in terms of performance with local service areas, from an environmental point of view with qualitative and security-

specific traffic characteristics, and with a certain characteristic or life And the age of development is defined (Bartone, 2003:16). The component parts of the neighborhood image according to the Kvin Lynch are node, the path, the edge, the sign, and the sphere.

Another definition of the neighborhood is "the location or separable segment of a regional urban area composed of different uses, integrated into an urban structure" (Cown, 2005: 54). Also, the neighborhood can be considered as the cell of life of urban life, an institutional neighborhood through which individuals and subjects can perform the ability for initial activity through an effective individual and collective interaction within it and beyond.

On the other hand, the neighborhood can be introduced as a social network and can be the foundation of social activity. As a result, the neighborhood is a spatial social identity, a territory that has certain restrictions known by its inhabitants. In such a realm, formal and informal confrontation and neighborhood recognition occur, the daily use of neighborhood services by residents and their awareness of the neighborhood image as part of their social identity point to the dependence between space and space. Localities also emphasize the various social, economic, historical and ecological conditions. Evidence points to the fact that the local community selectively creates organizational characteristics of social issues and social reactions that are widespread in the community (Louis, 1989:316).

### **3. The constituent elements of the neighborhood**

Each neighborhood generally includes index elements and distributive elements:

#### **A. Neighborhood indicator elements**

The neighborhood indicator element is an elementary school and should be in a position to maintain the security of primary school students and go to home or school within 5 to 4 minutes. The elementary school should be at the foot of the pedestrian, while also having access to the cavalry. The element is the identity of the mosque neighborhood. The mosque should also be located in the center of the neighborhood alongside the main road.

#### **B. Distributive elements**

Includes the following:

Daily Business - Weekly: In addition to everyday business units including barber, sewing, home furnishing, and home appliances, pastry and nursery, bookstore, laundry, floristry, keying, electrical, warm food, fruit and ice cream sales.

Park sites: Located next to the sports facilities of the neighborhood and has a children's library, a kiosk of snacks and health services.

12 to 7-year-old sports facilities and facilities including a swimming pool, small swimming pool, and volleyball ground, basketball and dressing room, which will be located next to the primary school and the park.

An independent medical unit including a general practitioner, injections and dressing, pharmacy (Habibi, 1999:13).

### **3.1 Neighborhood Center**

By creating a focal center at the neighborhood level and a network of sub-centers recalling the main center, the interactive move and linking forces in the center can be expanded to the neighborhood call. In this way, residents of their neighborhood share in the order created by the local skeleton.

By definition, the neighborhood center is often located in the physical center and is located in the neighborhood of the neighborhood even in some neighborhoods, including in Chaharbagh of Sanandaj or Noabad of Naiin neighborhoods. It seems that the formation of the neighborhood center actually is affected by other factors such as special situations, gradual development of the neighborhood and its proximity to the main ways of the localities before it was affected by the accessibility of the various parts of the neighborhood. Most neighborhoods are located either along the main pass or the main intersection or other passageways. Neighborhoods have either become square or axially formed along the main passage (Kangavari, 1999: 148). The main components of the neighborhood in traditional Iranian cities that are directly connected to the center of the neighborhood include;

#### **A. Node**

In the traditional neighborhoods center and sub-centers, there are distinct nodes at the neighborhood level, and they are the venue for the gathering and emergence of the economic and social activities of the neighborhood. Neighborhoods in terms of the breadth of their structural features have the main center or one main center with one or more sub-centers.

#### **B. Path**

The neighborhood access network is spider-shaped and organically based on walking. The dimensions of the tracks and the passageways were proportional to their operation, and most of the passages were bent and curl.

#### **C. Main passage**

The main passage along with the neighborhood center was formed along with it. It forms the backbone of the neighborhood and connects the neighborhood to other neighborhoods and downtown. The main roads are wider than other passages and have a smaller fracture along their length. Part of the main passage passing through the market, as well as connects the main passage to, uncovered space of Hosseiniyeh or Takaya.

#### **D. Alleyways or subways**

The alleys are separated from the main passage and provide links between different parts of the neighborhood and have a larger bend and lower width than the main passage. The presence of bends in the alleys has also been effective in protecting the security of the people against the attackers in addition to providing shadows and countering inappropriate winds.

## **E. Deadlock**

Deadlock is thinner than all passages and has lower length also. Branched from the alley and gives access into several apartments.

## **4. The concept of security**

The word security is from the Latin root "Secures", which means "lack of apprehension"; therefore, the lexical meaning of security, escape from danger, threat, harm, anxiety, panic, fear, concern or the existence of rest, confidence, Comfort, trust, supply, guaranty.

The safety of space has two dimensions of safety and security. In the safety component, reference is made to the environmental factors that, in the absence of satisfactory conditions for the occurrence of accidents, are inevitable, and the risks, potential and actual, of the lives and property of visitors, passers-by, and observers will be threatened (Sugino & Arima, 2014).

The security factor also refers to crimes against individuals and property, which, if they do not provide preventive conditions, will threaten the property and the lives of visitors, passers-by, and observers potentially and actual. A secure urban environment in its full meaning includes both of the above components, and the conditions that arise from the common ground can be described as safe urban spaces (Rothrock, 2010: 9). So space can be called safe, which has many features as well as physical and physical factors. In addition to this factor, another component that provides security in urban spaces is the existence of social interactions in that space (Salehi, 2008:112-113).

As a matter of principle, human beings need security and a sense of security in order to achieve their high humanitarian goals after fulfilling their physiological needs and, more importantly, security is a matter of security. Some experts perceive their sense of security in a community more important than security because it may have police and police security in the community, but the person does not feel safe, in other words, the subject of security begins with the person. And it ends with the family of society and ultimately the international system. In a safe city, safety is provided in urban areas and the person in the city feels safe and in danger (Salehi, 2008: 87-92).

### **4.1 Environmental security**

The phenomenon of insecurity, as stated, has two facets of the mind and the objective that the objective category of events, such as robbery and violence, and the mental aspect, includes the mental reception of the security of the region and space. Insecurity can be quantitatively calculated based on the amount or number of violence, the number of crime locations, nature and gender, and the age of the victim. What is perceived as a subjective concept of insecurity in the symbolic and cultural dimension of society is usually accompanied by anxiety and challenge, which we are witnessing most in the collective spaces of the industrial world. The concept of insecurity, despite

the overwhelming control of the police, is still one of the most dangerous social characteristics of society (Rabbani, 2002:11).

To create a sense of security and to preserve the safety of spaces at various levels, various approaches and processes have been proposed through international experts and committees, each with some sort of measures to secure a secure urban environment (Salehi, 2008: 107-114). According to studies on physical security, it can be acknowledged that strengthening community social motivation and promoting public oversight, along with increased transparency of public spaces and elements based on urban environments, and the elimination of physical and paradigmatic disorders. Can create a safe urban environment. At present, in advanced societies, approaches are being developed to efficiently design and optimize the use of all elements in the artifact environment. Two Canadian researchers, Wackerel and Whitesman, have three factors for increasing safety and security in urban space: awareness of the environment, visibility by others, and easy access to helpers if needed. Bettlera (2004) also sees three pillars in crime prevention in the area of law, social prevention, and appropriate environmental planning and design, which cannot be ignored in the environment, regardless of it (Poorjafar et al.:2008:74-75).

In National Institute of Crime Prevention (NICP) designing and making good use of the built environment is considered to be the proper factor for reducing crime and improving the quality of life; furthermore, attention to security is considered as the guiding principle of the design of the artistic environment.

#### 4.2 Principles of environmental design from the perspective of the CPTED approach

The CPTED approach outlines various ways of preventing offenses through environmental design, and the four main functions of this approach can be seen in the following graph:

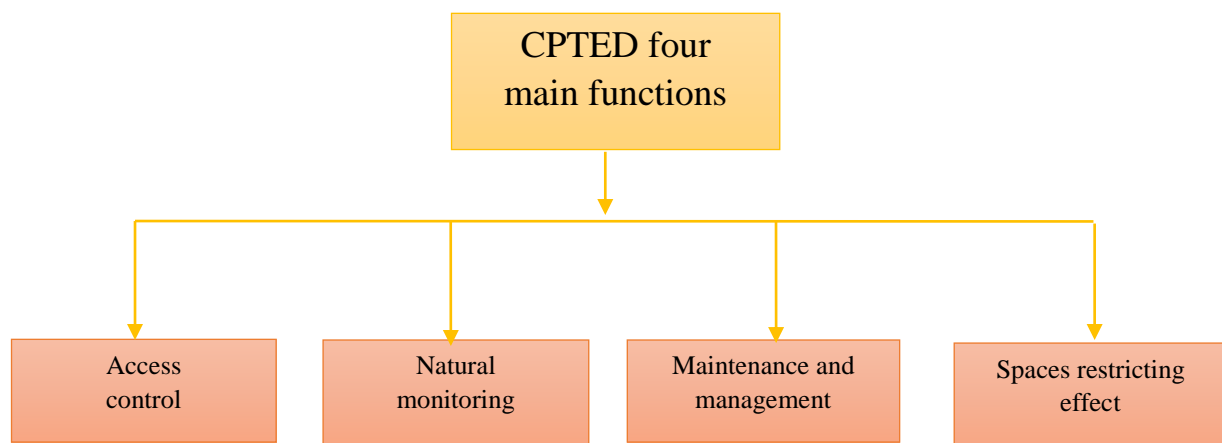


Figure 1: General Principles of CPTED ([www.ncpc.org](http://www.ncpc.org), 2009)

Based on the CPETD approach to designing safe urban spaces, there are important points and indicators that should be considered by the designers in their designs, which

is in line with the four principles mentioned in the CPTED approach, they are considered as planning and design strategies to enhance security:

- Bright lines and angles of vision;
- Reduced space and hidden and hidden paths;
- Provide enough light;
- Not designing spaces where there is a possibility of surprise and danger;
- Reduced spatial resolution;
- Optimal use of spaces;
- Use of signs and symptoms;
- Use of optimal activities and space utilization;
- Create a sense of ownership in order to maintain and maintain space;
- Design development and improvement of its quality in environmental design (International Institute for Combating Crime by Environmental Design, 2003: 3-29).

### 4.3 Check the CPTED historical process

The historical trend of the formation of the CPTED approach can be studied in the following periods:

**A.** The 1960s: In the decade, the issue of environmental security was presented in the book "The Death and Living of American Cities" by Jane Jacobs, and the following features were proposed to create a safe environment:

- Need for safe streets in the city;
- Separation and identification of public and private places;
- Diversification of use and their mixing at the city level;
- Effective and deterrent use of walking pedestrians in urban areas to reduce the likelihood of crime.

**B.** The 1970s: In the decade, Jeffery C.R in the book "Preventing Urban Environmental Offenses" and Oscar Newman in the "Defensible Spaces" suggested the following for environmental design:

- Reduce the natural potential of the mass of urban areas;
- Citizens must see and be seen (public monitoring);
- Transparency and exposure to public spaces;
- People's passion for reporting and dealing with violations and crimes.

**C.** The 1980s: Wilson & Knell and Bran Ingham described environmental security in Urban Criminology, during this decade "Broken Windows" was introduced, with the explanation that broken windows have the opportunity to commit and prospect of crime at the city level. Among the other suggested solutions for creating environmental security are:

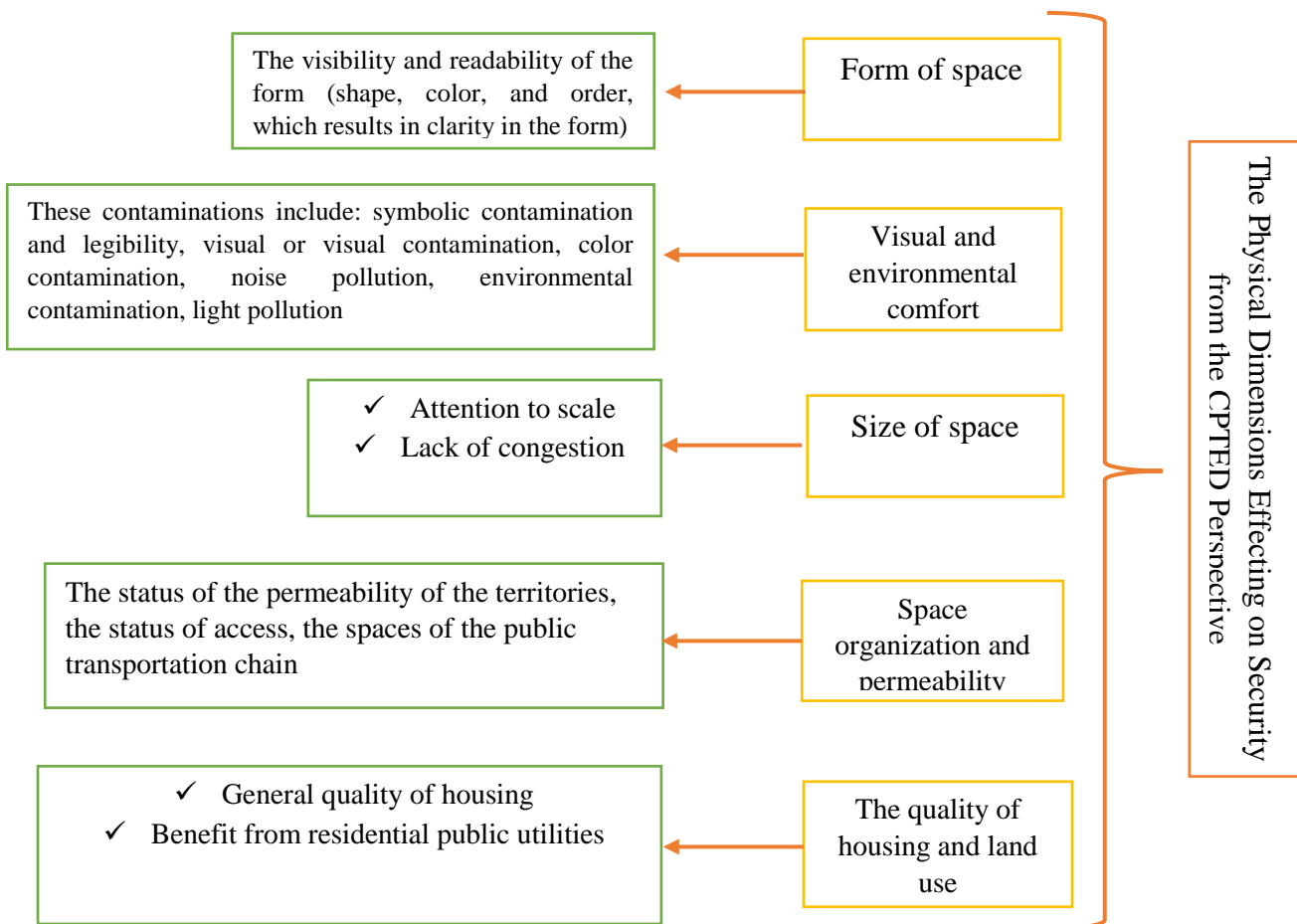
- Reduce the natural potentials of urbanization;
- Refers to the disruption of the design of the artifact environment;
- Pointing out and emphasizing the ineffectiveness of urban design and architecture rules and standards.

D. Eventually, in the 1990s and 2000s by Crow, Dan Fleisher and Fred Heinemann, CPTED's global training program on "Preventing Offenders through Environmental Design" presented the strategy and methodology of this approach and held a series of international conferences with the title of CPTED.

According to a statement from the National Institute of Crime, CPTED's approach is divided into two parts: the physical dimension that focuses on the city's physical capabilities and its control and deterrence in terms of offender crime behaviors, and the social dimension that prevents crime in urban-based behaviors it focuses on environmental psychology. In addition, the present approach has advantages that can be used to improve the quality of life and increase citizenship satisfaction (ICA, 2005) and to encourage social classes in the presence of the city (NCPC, 2006), reducing urban crime and reducing the crime rate of areas Urban (NICP, 2006), Increasing Economic Activities and Social Activities (JCI, 2006) and increasing the level of neighborhood cooperation and participation.

#### 4.4 CPTED's view on factors affecting physical security

The physical factors that influence CPTED's approach to increasing environmental safety are shown in the following graph:



**Figure 2:** The physical criteria affecting the security of urban spaces from the point of view of the CPTED approach (Minnery et al., 2005)



Also, for the design of urban spaces to enhance their security, the CPTED approach suggests the following:

- 1) Defensible space or territoriality design, so that every part of the space can be controlled by certain supervisors. Space controllers may be a group or person who is responsible for that space. The theory of defenseless spaces was first introduced by Newman. This theory has been criticized and evolved over the past 35 years, and today the relationship of spaces with day-to-day activities is the most important subject of research in this area. An environment design with appropriate layout for daily activities as well as access to space, etc., can intervene in this regard (Reynald et al., 2009:11).
- 2) Visibility and surveillance of space, so that spaces, where crime is more likely to occur, should be exposed to residents. To achieve this quality, the most important factor in designing how buildings and activity spaces are located in relation to high crime spaces (Minnery & Lim, 2005: 7).
- 3) Legibility or permeability of space, which makes it easy for people to choose their way and do not get lost in this environment. In this way, on the one hand, the waste of time and in vain the criminals are removed in the environment, and on the other hand, residents and pedestrians are less vulnerable to being placed in unprovoked spaces (Kelly et. al. 2009:8).
- 4) Dimensions and scale of space; Large and infinite spaces reduce the scale of social monitoring. Also, as people get more distance (especially pedestrians), they can reduce their risk of helping others at risk. To this end, special measures must be taken to secure large-scale urban spaces such as parks or open spaces between buildings. These measures include space lighting, space activities, and surveillance (UN habitat, 2007, p. 45). Also, according to the above ideas, the need for privacy and the problem of congestion in small spaces are directly related to the pathology of social behavior.
- 5) Mixed land use, one of the important strategies of this approach. A mixed application seeks to create a vibrant, vibrant and active environment at different times of day or night. By combining activities, urban spaces and environments can be kept alive at different times, and these spaces are subject to public oversight. The availability of space at different times reduces the likelihood of crime occurring (Lyon et al, 2007: 9).

## 5. Conclusion

Given the increased crime in the physical structure of cities, and the lack of attention of architects and urban planners to this issue and their lack of attention to appropriate solutions to prevent this, it is necessary to implement a new approach to implement the CPTED principles when designing buildings or the urban structures. The importance of this issue is for that compliance with these principles can increase the sense of security of citizens, which increases the level of citizenship satisfaction and is one of the ways to

increase social welfare in the city. Accordingly, CPTED's strategy and principles in the process of architectural design or urban design should be addressed and implemented in an operational manner. Security is becoming increasingly important, especially in a neighborhood called neighborhood center, whose design is very important in today's neighborhoods. In line with the implementation guidelines for urban design and architecture, a number of issues need to be addressed that their application in the design process and the construction and implementation stages can reduce the capacity of the regions to organize and form a safe neighborhood center.

- Strengthening natural territories in a neighborhood center. By strengthening the sense of ownership of the people towards the neighborhood and the neighborhood center, it allows citizens to find that the neighborhood belongs to them and they must be diligent to increase their safety and security.
- Access control; In the design of the site, how to access, and the inputs and outputs of the site, efforts should be made to provide some kind of clarity and clarity on the site, and in particular the inputs and outputs, so that it can be monitored publicly and exposed provision should be made.
- Natural surveillance; the possibility of direct citizen monitoring on urban spaces should be possible and preventing direct citizens from monitoring urban spaces, and preventing the creation of blind and remote access environments that increase the potential for mass crime.
- Supporting social activities; By creating and designing community activities in places with potential for crime, it is possible to increase the level of public oversight of the center of the neighborhood so that these areas can be enjoyed by public favors, either on foot or as an arena for social interactions And citizenship monitoring.
- Maintenance; By maintaining urban furniture and equipment, and in particular the urban infrastructure in the neighborhood center, reducing the level of crime potential in the center of the neighborhood through the support of natural monitoring and the formulation of natural areas and the possibility of supporting social activities; possibility to increase citizenship control.

Also, based on the principles outlined in the CPTED approach, the following implementation strategies can be proposed:

- Continuous use of neighborhood center by neighborhood people;
- Use of signs, signs and visual signs through visual communication art;
- Increasing natural monitoring and expanding sense of ownership through social institutions;
- The use of deterrent methods by social networking translators;
- Use of urban design solutions such as landscaping, fencing and fencing in the design of the neighborhood center;
- Use blocking barriers such as walls, fences, and fences;
- Use of appropriate urban infrastructure such as floor coverings, walls, and landscaping in the center of the neighborhood;

- Good and adequate lighting on the input and type of access system;
- Observe the standards of urban furniture such as lighting lights;
- Creating appropriate applications in the neighborhood center to fit your needs;
- Reflections on how to access public spaces;
- Enabling human presence with service facilities;
- Enhance natural visibility despite vegetation;
- Create congestion in social activities in the neighborhood center;
- Setting up specific economic activities in the neighborhood center;
- Placement of appropriate service activities;
- Maintenance of urban equipment, including signs and signs in the center of the neighborhood;
- Protecting the damage to the equipment in the center of the neighborhood, like protecting street lights;
- Landscaping based on increasing visibility and monitoring criteria.

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