

Streets as Social Places

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Historical context

Many changes took place over the years regarding the role of the streets in the community's life. During a long period in history, streets acted as the social centers of towns and cities, providing the proper scenario for socio-historical events (Appleyard, 1980). For children, in particular, the public streets were places where they learned a lot about the world. With the increment of motorized and faster traffic, the potential danger of the roads led to the necessity of safer infrastructures and the progressive separation of road users (Hamilton-Baillie, 2004; Project for Public Spaces, 2017). Therefore, during the first decades of the 20th century, the (re)design of the streets traffic started to push people out to sidewalks. During the following decades, the separation between pedestrians and cars increased significantly as several road traffic elements (e.g., traffic signals, asphalt, road marking, parking lanes, crosswalks) gained importance (Hamilton-Baillie, 2004; Project for Public Spaces, 2017). During this period, street features related to playing, shopping, and chatting, markedly reduced their presence in the street environment (Project for Public Spaces, 2017). One consequence of such changes was the reduction of the time children spent outdoors and the emergence of artificial playgrounds surrounded by secure fences.

Principles and elements of the “living street”

During the late 1960s and early 1970, a new street model called “living street” (“woonerf” in dutch), was developed in the Netherlands by Niek de Boer, Professor of Urban Planning, and engineer Joost Váhl (Hamilton-Baillie, 2004; Karndacharuk, Wilson, & Dunn, 2014). This street model was a reaction to the prevalence of motorized vehicles on the traditional city streets and the loss of independence of mobility by children (Hamilton-Baillie, 2008). The woonerf concept was a new approach to traffic management and street design, stimulating pedestrian mobility, children's play, and social activities in streets that

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are also shared by cars (Hamilton-Baillie, 2008; Karndacharuk, Wilson, & Dunn, 2014).

Hans Monderman, a traffic safety analyst in the Netherlands, was one of the main pioneers of this new paradigm of integration, developing a number of ideas of how urban design and traffic engineering might work together (Hamilton-Baillie, 2004). He centered his approach on the organization of the spaces shared between vehicles and pedestrians, considering that behaviors of street users are conditioned by their perception of risk when navigating the environment (Monderman, Clarke, & Baillie, 2006). In his view, people tend to take more risks and less responsibility in the presence of numerous safety rules. In the alternative, lesser guidance (e.g., removal or downgrade of measures of road signs, barriers, and lights) could stimulate individuals to communicate more and pay more attention to each other in traffic (Hamilton-Baillie, 2008; Monderman, Clarke, & Baillie, 2006), since in these conditions, drivers and pedestrians take more shared responsibility to guarantee road safety (“negotiating in traffic”). Although Monderman and colleagues (2006) were convinced that the implementation (supported in information and training) could turn the streets of the town centers into more attractive places to live and work, they also recognized that such innovational ideas could be difficult to be accepted at start.

Most of the contemporary shared or living streets, evolved from the original concept of woonerf (Karndacharuk, Wilson, & Dunn, 2014). The principles that govern a woonerf street in a suburban environment, in which the integration between pedestrian and traffic activity is of major importance, were well systematized by the scholar and urbanist Ben-Joseph (1995). According to the author, woonerf is a part of the residential public space, shared by pedestrians and motor vehicles (paved space did not demark the sidewalk rigidly) although traffic is discouraged. In the woonerf, entrances are clearly marked, the speed of the vehicles is restricted (using deviations, undulations, and bends), landscape and furniture are extensive, and walking and playing are welcomed activities.

The woonerf and other related concepts highlight that streets should be inclusive and seen as living, social, pedestrian-focused, and safe shared places (Hamilton-Baillie, 2008; Karndacharuk, Wilson, & Dunn, 2014). This new paradigm of shared spaces, intends to bring pedestrians to the urban outdoors, integrating pedestrian social activities into the underlying transport functions of the public road space (Karndacharuk, Wilson, & Dunn, 2014). It assumes that streets should be integrated (shared) within the broader built environment (e.g., quality of parks, green spaces, sidewalks, public spaces, zoning) in a way that promotes social interactions and community engagement (Hassen

& Kaufman, 2016). In this line of thought, by expanding the space (e.g., wider sidewalks, promenades, public parks) that is available for public life in urban contexts, one can increase the number of people outside, stimulate social activities, and build stronger communities (Bain, Gray, & Rodgers, 2012). In a safe and pleasant urban environment, it is expected that more street events emerge (e.g., festivals, educational projects, and activities), fostering community participation and connection, facilitating play and cultural activities, as well as physical activity (National Street Service, n.d.).

Safety

Safety is one of the main principles governing the design of living streets. Having people outside, requires creating a sense of security; for instance, the perception of risk markedly influences the level of permission given by parents for children to play outside (e.g., Veitch, Bagley, Ball, & Salmon, 2006). Therefore, safety conditions should be created allowing young children to walk, cycle, and play safely through neighborhood streets, and to have independent mobility to schools, playgrounds, parks, or other places (Appleyard, 1980; Biddulph, 2011; Whewey & Millward, 1997). Traffic-calming measures are of major importance to make public streets more friendly and have a positive influence on its popularity (Whewey & Millward, 1997). By reducing the volume and speed of road traffic, while maintaining them permeable for pedestrians and bicycles, more opportunities for outdoor play can emerge (Biddulph, 2011).

Traditional traffic calming can include many features (Aerts, 2018; Forman, 2017; Project for Public Spaces, 2017). Here we designate some of the most common safety strategies that should be considered when designing a public road:

1. making drivers feel that they are entering a different domain (a private street) by using a bump at the entrance and the exit, painting the road in different colors, and using child-friendly street signs;
2. narrowing the street physically and visually by using natural barriers;
3. parking on one side only or using special parking places for visibility of drivers and children;
4. creating speed limits for vehicles (10-15 km/h);
5. integrating bicycle routes and bicycle parking points.

In figure 1 we can see an example of such principles applied in the design of the OPIECE educational playstreet.



Figure 1. An example of a road integrating in its design safety aspects. VFO Architects Urban Design bv & Stichting Drio©

Educational and playful streets

Play is a powerful learning and developmental tool for children. It can stimulate in an easy and pleasant way, cognitive, socioemotional, and motor development. It is fundamental that streets and neighborhoods afford children's play, which means that they should be child-friendly, in the sense that they should stimulate children's activities in a safety background. When creating child-friendly neighborhoods, landscape architects and urban designers should work together, and a number of elements should be considered, including sidewalks, cycling routes, neighborhoods roads, public transit shall, informal paths shall, circulation organization, playgrounds, and natural landscapes (Accola, n.d.).

The sidewalks should be wide, have furniture and vegetation, incorporate kid routes using iconography or color palettes, and contain a barrier (e.g., using on-street parking or vegetation); neighborhoods roads should utilize woonerfs when possible, use measures to slow traffic, and differentiate the crossing areas. The quality of the outdoor spaces will be much improved, if the playground areas are 'bespoke', well located, make use of natural elements, and provide a wide range of experiences (e.g., gardening; social encounters). They should allow children of different ages to play together, be accessible to children with

disabilities, give space for children to experience risk and challenge, be sustainable and appropriately maintained, and be able to change over the years. The schools can also contribute. In specific, they can develop 'greening' school grounds, to include design elements such as gardens, trees, shrubs, water features, and artwork and gathering areas (Dyment & Bell, 2008). Children should be involved in designing, creating, caring for, and using school nature areas (Bell, 2001).

Involving children in the design of the streets and outdoor spaces

For better planning of the public spaces, urban planners should get the contribution of the people that will regularly use such spaces, including children. Hence, child-responsive urban settings should be inclusive of all society and empower children to participate actively in decision-making, encouraging civic participation and connectivity. In particular, Hart (1992) created a youth ladder of participation with eight different levels of participation. The first three rungs of the ladder corresponded to "non-participation levels", where there is a strong propensity of adults to undervalue the competence of children. In the other five rungs of the ladder, there is an increasing degree of children's participation in public space projects: assigned but informed – e.g., a group of children color the street crossing after being properly informed of its purpose; consulted and informed – e.g., children are consulted by a decision-maker about specific questions regarding public space design, and their opinions are really considered; adult-initiated, shared decisions with children – e.g., children are asked to participate in planning a playground; child-initiated and directed – e.g., children produce their own street or playground design plans; child-initiated, shared decisions with adults – e.g., after realizing that there are safety problems in their street, children work in a design/project to solve it and mobilize adults to implement it.

Unfortunately, very often, the children's role in public space is considered as one of a passive user rather than an active player in its development (CABE Space & CABE Education, 2004). The work by Hart (1992) highlights the importance of considering children's needs and desires. Designers, parents, municipalities, and child educators should work together with children (and youth, in general), discovering ways to empower them and to display their choices, aspirations, and visions for planning urban changes. If children are involved and contribute to decisions about what happens in their environment, they will develop respect for the community, learn about the role of local government, and develop a sense of responsibility when using public spaces (CABE Space & CABE Education, 2004).

Some architectural design examples

Local organizations and municipalities should work together on the design and construction of streets and neighborhood areas in accordance with “living street” principles. In the context of the OPIECE project, the OPIECE team, led by Drio, worked with VFO Architects Urban Design to provide guidance and reference cases to build from. Two examples of the design of the OPIECE educational play street are provided below:

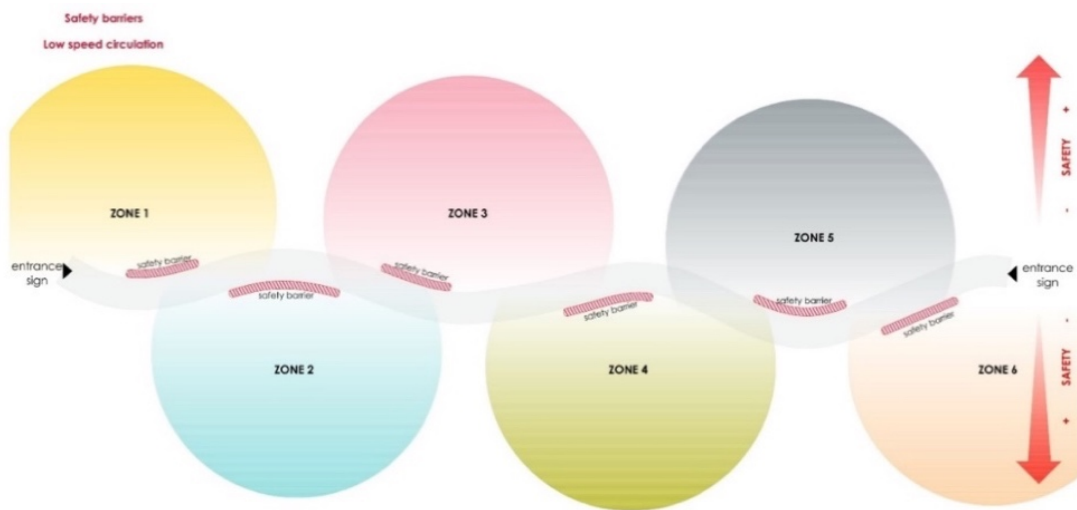


Figure 2. Reference case 1: This case of a child-friendly living street will be relevant when there are no empty areas defined (VFO Architects Urban Design bv & Stichting Drio©)

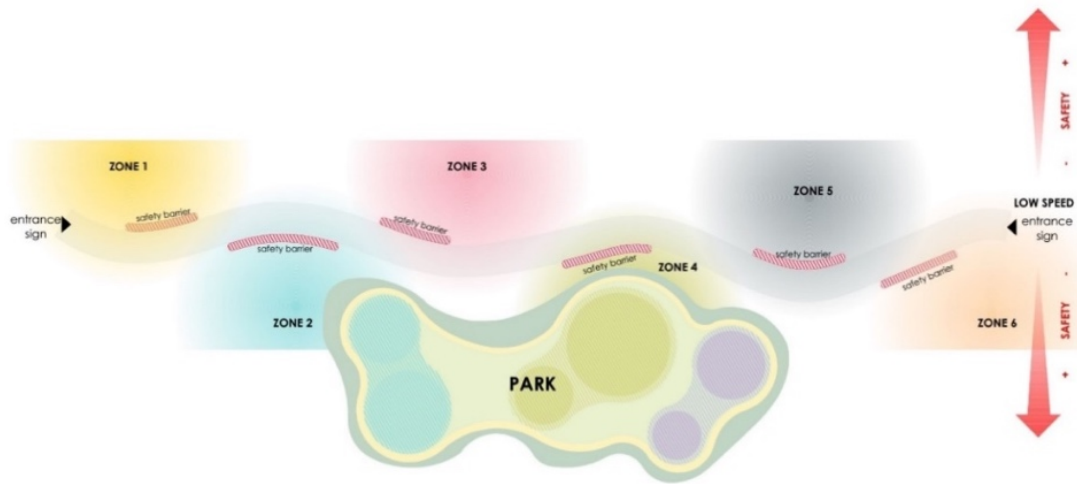


Figure 3. Reference case 1: This case of a child-friendly living street is similar to the educational play street of the OPIECE project from Hendek Municipality, with a larger empty play area under it (VFO Architects Urban Design bv & Stichting Drio©)

Final note

The design of a child-friendly living street should successfully balance the interaction between the traffic and children. Essential dimensions of a living street are safety, play, and learning. Safety is created by a clear and readable overview of what is where and by the consequent expectations created in the users. In this line of thought, a car is a visitor to the street area. The design of the area and its elements should make the driver immediately perceive that he/she is entering in a specific type of street, that requires him/her a change of behavior. As the car increasingly enters the street's specific domain, providing safety to the children and other pedestrians, the street is required to force the cars to slowly drive and to give drivers a large field of view (e.g., corners should be avoided). If necessary, barriers towards the road should be provided, either by small hills or other elements (e.g., vegetation). Living streets are also wonderful places for children to play and learn about

themselves, others, and the world. At the outside environment, they can engage in many physical activities with their peers and can also perform some activities alone. Therefore, it is desirable to have spaces that afford independent and group play, as well as spaces that afford movement and mobility.

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