PUBLIC SPACE AND PLAY THEORY, READING AACHEN THROUGH PLAY THEORY

Pelin Işık[1], Christa Reicher[1], and Ceren Sezer[1]

Abstract

Public spaces serve as the sensory system of urban life, and are crucial for interconnecting individuals, ideas, and cultures within the fabric of cities. This study provides a fresh interpretation of public spaces by examining people's activities from a new perspective. By applying play theory to public space analysis, the study uncovers spontaneous and unplanned activities and the novel relationships which exist between users and their environments. In so doing it paves the way for a new approach to public space design.

With a focus on Aachen as a place of play, this study seeks to develop urban design tools that take into account users' leisure time activities. By recognizing the unique relationships that play can create between individuals and their surroundings in terms of perceptions, intentions, actions, and uses of space, the research encourages a fresh perspective on urban design tools. Ultimately, the findings of this study offer a new design approach for creating public spaces that are more participating, inclusive, and user-centred.

Keywords

public space, social life, play theory, urban design tools, relationship user-space

[1]   RWTH Aachen University

1. Introduction

Public spaces serve as areas of freedom and social interaction, where individuals gather to express themselves and establish social relations (Arendt, 1998; Mitchell, 1996). Individuals construct their own self-existence and produce their own public spaces by encountering distinctions and varieties in public space (Sennett, 1977;1994). Through their behaviours, actions, and communications, individuals establish different relationships with the environment and shape the relationships that exist between people who use these spaces (Lefebvre, 1991;1992).

Lefebvre's discourse emphasizes that space is a social production, and that everyday life provides important data for examining public space (Lefebvre, 1991;1992). The continuous re-interpretation and production of spaces by individuals highlights the dynamic nature of public space, as well as the need to incorporate users' perspectives in the design of public spaces. By recognizing the role of individuals in shaping public spaces, urban designers and policymakers can create more inclusive and user-centred public spaces that better meet the needs of citizens.

Interpreting public space through everyday life behaviours and actions, and the relationships between spaces and users is a vital issue in contemporary society (Stevens, 2007). By investigating public space through everyday life, we can discover play theory, which enables us to both integrate cities and their users' lives, and embrace urban diversity (Stevens, 2007). This approach encourages the development of public spaces that meet the new needs of users whilst also creating new forms of spaces and life.

When examining public spaces in a city, it is necessary to consider their social characteristics in addition to their physical condition and any regulations that govern them (Madanipour, 2003). Viewing public space from a play perspective allows us to see a city as an organism in which citizens participate in shaping and evolving the city through their everyday interactions and use of spaces (Stevens, 2007). This organic relationship between users and public spaces creates a dynamic and responsive environment that better meets the needs of citizens and encourages their participation in shaping the (given) city's future (Madanipour, 2003).

Public spaces possess disparate characteristics due to their physical, social, and demographic structures. These, in turn, influence people's everyday lives and their relationships with space. The important point here, is to look at where people want to spend their time, where they feel safe and relaxed, and what kinds of public spaces can be used in various ways and by different types of people. This study compares two different open public areas in the city of Aachen using play theory and determines the diverse ways in which people utilize public space. The research areas are Frankenberger Park and Bürgerpark - both of which are close to the city centre, and open public spaces in the Driescher Hof neighbourhood which is located on the city's periphery. By comparing public spaces, the study examines how people can produce play and use the space according to its qualities. Additionally, this research focuses on observing which features of public space allow playful activities. The study is based on acquiring social and physical information about the areas studied and was also informed by performing fieldwork on how people use public spaces; specifically focusing on playful activities.

2. Public space, sociality, and everyday life

Public spaces are defined as areas that are independent of state authority and capital sovereignty, where thoughts, discourses, and actions are produced to identify and develop the relationships and behaviours of society. Hannah Arendt considers public space as providing individuals with "the widest possible publicity" and the possibility to "be seen and heard by everybody," creating mutual recognition which leads to common communication and cooperation between individuals. Arendt further describes public space as a field that produces plurality, where people come together in an unplanned manner to try and answer the question of "how to live together?" (Arendt, 1958; 50). Sennett notes that public space is a free space where there are no strict and unalterable standards of behaviour, and strangers encounter the unknown quantities of the (given) city (1974: 49). It provides a setting for various modes of relationships between friends, strangers, spectators, and performers. By participating in the opportunities of social behaviour and reactions, individuals gain the ability to explore new platforms of social and space settings (Learnard and Learnard 1984: 18).

Public spaces acquire their social characteristics through the everyday life activities that take place within them. Everyday life encompasses all the activities, conflicts, and experiences that create space as a meeting place, bond, and common ground. There are three aspects to the relationship that exists between people and space in everyday life: representational spaces, physical space, and representations of space. Representations of space are conceptualized spaces which are constructed and defined by scientists, planners, urbanists, and social engineers, and have common social codes. Physical space refers to the physical features of a space, without social conditions. Representational spaces, on the other hand, are defined by their inhabitants and users through complex associations, and make symbolic use of physical objects. This space is an underground and alternative space that emerges in everyday life activities, particularly in play (Lefebvre, 1991). Representational spaces, whether they have a material existence or not, are symbols, and allude to ideas of sociability. Social practices in public spaces are critical to understanding the dynamic tensions that shape everyday life in public spaces, especially through the role of play (Stevens, 2007).

3. Definitions of Play

The topic of play in urban areas has gained increasing attention across various fields of study. Play is viewed as a crucial element of life in disciplines such as history, architecture, urban theory, and design methodology. In addition to existent literature on children's play and digital game theories, adult play and playful spaces have also become the subject of research. It has been argued that play provides the historical social order of people as well as meaning to their existence. Furthermore, play is a subject that allows people to create new spaces by engaging in different actions in everyday life. Some scholars also conceptualize public spaces as a playground; emphasizing the limitless possibilities of public life and usage.

When people think about play, they associate it with childhood activities, leisure time actions, sports activities, and other activities that are separate from work. However, playing is more than just these activities. It is also an act of understanding the world and oneself, as well as a way of engaging with others. Play is a mode of constructing one's personality, experiencing the world, and exploring one's capabilities (Sicart, 2014). It frees people from moral conventions and allows them to understand their existence and importance. Play is an ambiguous concept that can encompass all occupations and activities, as everyone engages in playfulness in their everyday lives, even if they do not realize it (Sutton-Smith, 1997).

Play is an activity that appears to have a diverse range of uses and is intertwined with various aspects of everyday life. Lefebvre (1992) suggests that urban play is an essential part of a broadened understanding of human needs. The functions of cities are crucial for their social value, but they are also diverse and evolve with play. Social behaviour in public spaces is not solely functional, but is rather the center of possibilities and unfamiliar constructions. Play enables the creation of new, unconventional relationships that can challenge power systems, such as representations of space. The play of adults is often characterized by unexpected, non-instrumental, active, and risky behaviours that deviate from practical models (Stevens, 2007:17).

According to some theorists, play has a historical significance in cities. Huizinga (1995) argues that human society is permeated by play from the start, and that the formation of culture can be understood through play theory. Primitive people gave their lives significance and organization by playing, and it enabled them to produce their truths, actions, rules, orders, rhythms, and aesthetic qualities. In contrast, Giorgio Agamben (2007) describes the historical development of cities and sees play as an important layer in the transition between the concepts of religion, profanation, and play. Religion is a sacred thought system that removes things, places, animals, or people from common use and transfers them to a separate, unchangeable sphere. Profanation, on the other hand, involves reusing objects and reorganizing politics, laws, and spaces. The passage from the sacred to the profane comes about through entirely inappropriate use (or, rather, reuse) of the sacred, ie. play.

Van Eyck (2008) suggests that play is an activity that can transform public spaces and sociability. Van Eyck argues against urban planning designs that are divided into functions, such as living, working, entertainment, and green space, and claiming that cities are more than just a collection of functions. Instead, they must be designed to enable people to perform their activities and build sociability (Grabow and Spreckelmeyer, 2015). By emphasizing the importance of playful activities, play is considered to be social communication system

that allows people to understand that the conditions of public life are changeable and shaped by human actions (Sennett, 2010). Social behaviour in public is not just functional but can also be an active, informative, and critical response (Stevens, 2007). Playful activities that occur in public spaces often arise as a dialectical critique of the stability and rationality of sociability. These activities are usually spontaneous, voluntary, or creative, and provide a way to challenge social norms and conventions (Bourdieu, 1977).

4. Study Areas

The study areas comprise two public spaces in Aachen: Frankenberger Park and Bürgerpark, and open public spaces in the Neighborhood of Driescher Hof. Before delving into the research spaces, let us take a glimpse of Aachen. It is a city located in the administrative region of North Rhine-Westphalia, and sited on the border with two of its neighbours. More than half of the city's 85-kilometer border runs along Belgium and the Netherlands. The city's economic development department is responsible for stimulating activities that compensate for and exploit its border location. Aachen is an historic city renowned for its young population and its technological universities. It is a vibrant and dynamic city with a cosmopolitan structure that includes people from different nations.

Frankenberger Park and Bürgerpark are situated in Frankenbergerviertel neighbourhood. The neighbourhood is named after Frankenberg Castle, a former water castle which is now used as a museum, a place of culture, and an activity centre. It is located in the middle of Frankenberg Park. Frankenbergerviertel is located next to the Aachen ring, and middle-class people and students predominantly live in this area. In addition to housing, the neighbourhood includes buildings with different functions. Frankenberger Park offers various spaces in terms of the effect of the cultural, entertainment, and educational structures around the park. Additionally, the park is surrounded by schools, bookstores, a large indoor concert hall, and music workshops (Figure 1).

Over the past few centuries, the city of Aachen and subsequently Driescher Hof have evolved from being primarily agricultural areas to a more urbanized, built-up city. In the 18th century, Central Aachen developed as a prominent town in the area, while Driescher Hof remained largely undeveloped as a peripheral area. Driescher Hof has experienced significant growth over the last two decades, and has a current population of 5,300 inhabitants who reside within an area of 1.1 km2. This neighbourhood has a high proportion of foreign persons and immigrants who face challenges in their social interaction with the city centre. The neighbourhood's weak network and social ties are its primary problems. The research area comprises two different locations: a playground in the middle of the neighbourhood and a store area that is home to small stores, offices, cafes, and a market (Figure 2).

Figure 1: Map of Frankenbergerviertel neighbourhood and research areas; Frankenberger Park and Bürgerpark

Figure 2: Map of the Driescher Hof neighbourhood and the research areas.

5. Methodology

The methodology employed in this study was designed to capture the dynamics of spontaneous, risky activities. To achieve this, the tools of environment-behaviour research were adopted; specifically, behavioural mapping and photography. Behavioural mapping involves associating the design features of setting or location with behaviour in both time and space, and allows for the examination of which spaces people use for unplanned activities (Bechtel and Zeisel, 1987).

Structured visual observations and other quantitative techniques were utilized to collect data, which could be analysed in the style of public open space. The methods integrated behaviour observations with GIS mapping to create empirical databases of environment-behaviour interactions that were directly linked to the kind of activities being undertaken and the space (Golicnik and Thompson, 2010).

To ensure sufficient observation, a time limitation was imposed. Each public area observation was ten minutes long, after which the research team moved to the next area. Detailed data collection for each open public space involved systematic observations of all parts of each space on several different occasions in April, May, and June 2021. Data was collected between 3 pm and 5 pm, spread out over both weekdays and weekends. The three months for the observations were chosen as a time when the weather was likely to be warm, and outdoor activities in open public spaces would be likely to be pleasant.

The observations collected information on the type of activities being undertaken; enabling the preparation of detailed data collection codes and symbols. The activities observed included sitting, chatting, standing, lying, eating/drinking, reading, shopping, window-shopping, people-watching, performing, talking, panhandling, smoking, walking pets, pushing strollers, vending, and so on. It is important to note that people passing by or entering a premises without stopping were not recorded in the walk-by observations. The aim was to learn and comment on the numerous new and unfamiliar people, customs, behaviours, and activities observed during the study.

In summary, the methodology used in this study was designed to capture the dynamics of spontaneous, risky activities using the tools of environment-behaviour research; specifically behavioural mapping and photography. The observations collected information on the type of activities, and allowed for the preparation of detailed data collection codes and symbols. The integration of behaviour observations with GIS mapping created empirical databases of environment-behaviour interactions that were directly linked to

the kind of activities being undertaken and the space. This approach provided a comprehensive and detailed understanding of the relationships that exist between the temporal and spatial forms of the physical setting and people's behaviour in public open spaces.

6. Framework

6.1. Case 1: Frankenberger Park and Bürgerpark

The daily observations of individuals sitting in Frankenberger Park and Bürgerpark on a warm and sunny early afternoon revealed that a substantial number of people chose to rest on the grass, stones, and benches. The visual representation of the data in Figure 3 indicates that the areas and activities that attracted the greatest number of participants varied between different age groups, with certain locations being popular among both groups and individuals.
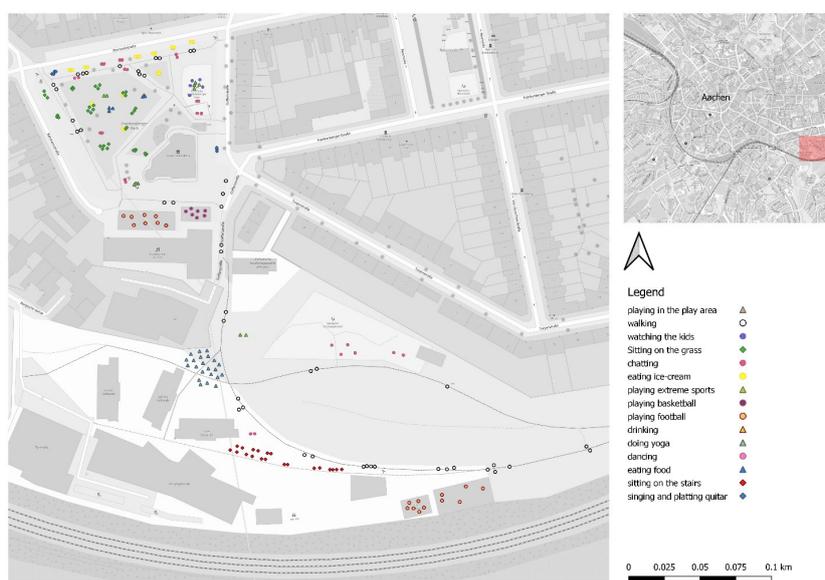

Figure 3: The GIS behavior map of Frankenberger Park and Bürgerpark, 12.6.22, 4-4.30 pm.

The green areas surrounding the castle, and the seating units used as flower beds at the edge of the park serve as suitable locations for various activities, such as singing, playing guitars, sitting, eating, and playing with balls; as illustrated in Figures 4 and 5. These areas enable individuals to engage in a range of leisure activities and may provide a sense of comfort and relaxation to visitors.

Figure 4: Young people are playing guitars and singing

Figure 5: Adjacent attractions; different activities

Figure 6: People practicing yoga

Figure 7: A young man engaged in extreme sports

Within Bürgerpark, a green area in front of the school building at the park's entrance allows for collective activities, such as yoga and gymnastics (Figures 6 and 7). The stairs next to the school building provide a convenient place for sitting and resting (Figure 8). The park also features a football court surrounded by graffiti-painted walls; this area attracts people of diverse ethnicities and heterogeneous populations who enjoy playing football together (Figure 9).

As one continues through the park, a walking path emerges, enveloped by trees and following a railroad track. Along this path, some areas feature colorful graffiti paintings, as well as various writings and pictures on the walls and floors (Figures 10 and11). These artistic expressions serve to enhance the aesthetic appeal of the park and may contribute to senses cultural inclusivity and diversity.
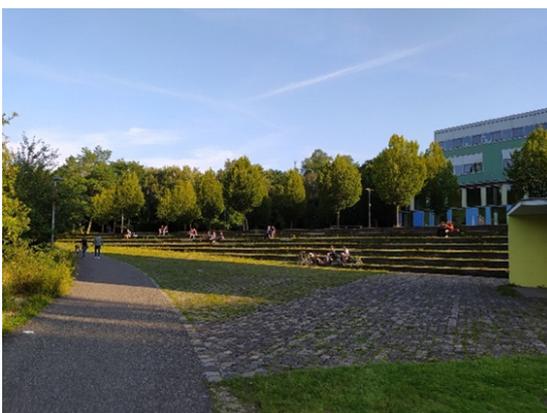

Figure 8: People sitting on the stairs and chatting

Figure 9: Football field by graffiti wall

Figure 10: Graffiti and informal space products

Figure 11: Graffiti and playground elements

6.2. Case 2: Driescher Hof neighbourhood

Observations revealed that the Driescher Hof neighborhood lacks suitable areas for play activities. The behavioural map of the neighbuorhood, based on 10-minute observations of selected areas illustrates the activities recorded during the observation period, while the GIS map highlights the collective actions observed throughout the entire observation period in specific locations. These maps provide valuable insights into the use and availability of play areas in the Driescher Hof neighbourhood; potentially informing future interventions designed to improve the provision and quality of play opportunities for residents (Figure 12).
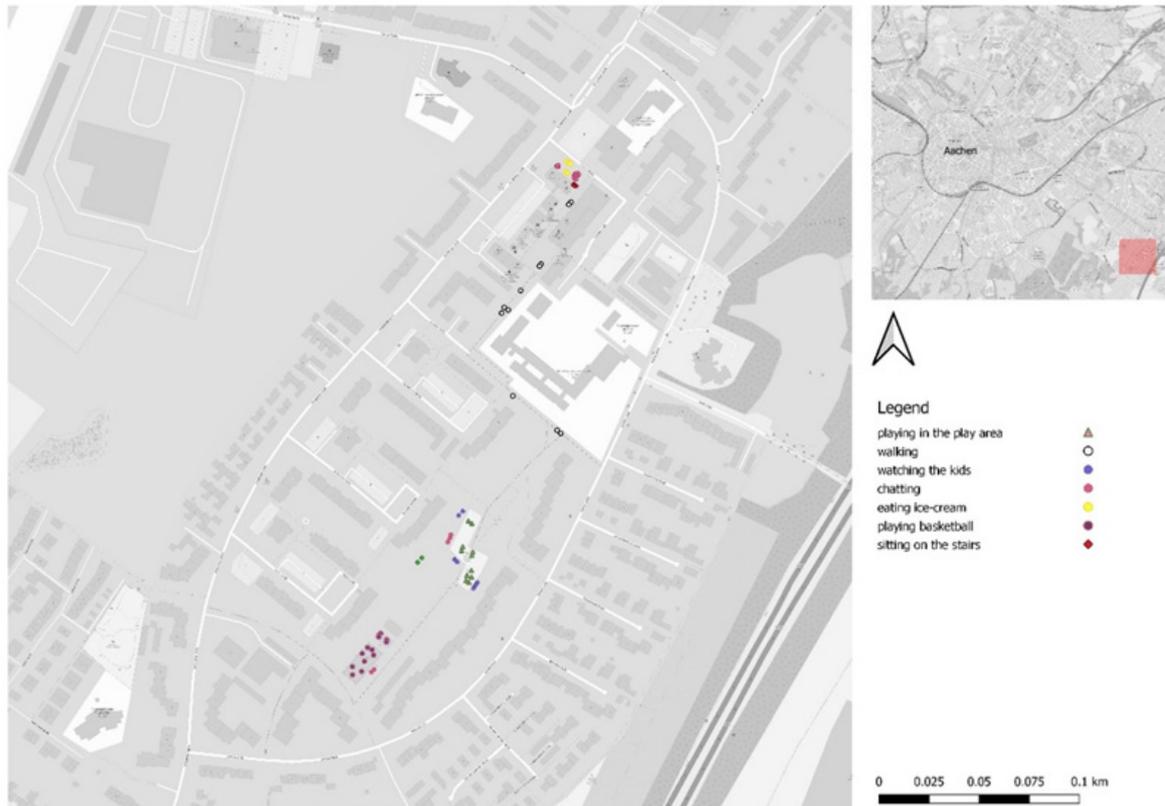

Figure 12: The GIS behavior map of Driescher Hof neighborhood 4.6.22, 4-4.30 pm.

The playground situated at the heart of the neighbourhood is exclusively accessible to residents and serves as a primary play area for children while adults supervise their activities (Figures 13 and14).

Figure 13: Families sitting on the grass.

Figure 14: Families watching their kids.

The primary space where children and adults engage in play activities together is situated in front of the restaurant and cafe. While this space is often utilized for the purpose of purchasing food and beverages, it also serves as a communal area where individuals frequently spend a considerable amount of time conversing. The area encourages spontaneous interactions and a range of activities such as enjoying ice creams, resting by sitting on the stairs, and cycling. Notably, this space is located distantly from the residential zones, and the restaurant and cafe only provide outdoor seating arrangements when the weather is favourable (Figures 15 and 16).

Figure 15: Spontaneous encounters

Figure 16: Diverse actions

In the center of the neighbourhood lies a commercial district that comprises a large shopping centre, a store, a hair salon, and official spaces surrounded by several school buildings. Unlike the area in front of the restaurants and cafes, this district is relatively isolated and limited in terms of social activities (Figures 17 and18).

Figure 17: Parking area between stores and the main street.

Figure 18: The wide area surrounded by stores and the market.

7. Findings

Frankenberger Park is perceived as a playful and interactive public space that encourages the use of the space. Lynch (1960) emphasized the impact of education and art functions on people's perceptions of the environment and the quality of a space's image. In line with Gibson's affordance theory, objects and elements in the park have positive qualities that enable people to use the space as they wish (Spencer, 2013). For instance, a chair provides opportunities for sitting, whilst a piano provides opportunities to either listen to or perform music. Such offerings encourage people to interact with the park's environment in playful and creative ways.

Bürgerpark provides spaces for unexpected and spontaneous activities, thereby allowing people to experience differences and a sense of personal control over their experiences and tactics with the space. De Certeau (1998) defines such social relations that people establish with objects in a space as 'tactics', and further suggests that

they are spontaneous and indeterminable actions that produce new relations between space and users. The park also enables creative possibilities such as art, and graffiti, thereby showing that the space can be used for different functions, as well as informal uses that may encourage chance encounters, social mixing, exploration of the unfamiliar, and risk-taking (Stevens, 2007). In summary, the park's design and its offerings support diverse and playful uses of the space therein, and through so doing promote , social interaction, creativity, and individual expression.

Public spaces located near commercial destinations, such as restaurants, churches, and hair salons, have been found to increase the diversity of activities and social interactions that occur within the same (Nathan et al., 2012). In the Driescher Hof neighbourhood, the public space in front of the cafe and restaurant provides an alternative and interactive type of space use, enabling temporary playing and meeting places for adults and kids. This small space creates the perception of a neighbourhood centre in which residents gather together through their diverse uses of the space. Moreover, different activity repetitions in a place may create new memories of space perceptions and increase the frequency of various uses (Caillois, 1961). It follows, that public spaces that encourage diverse and playful activities and social interaction contribute to the vitality and liveliness of neighbourhoods.

8. Discussion: Environmental characteristics of play areas: comparing the centre with the periphery

Table 1 compares the public space of the central and peripheral areas of Aachen with regards to the features of spaces which give opportunities for play activities . The environment features that provide opportunities for playing activities include attractiveness, safety, security, mobility, opportunities for socializing, and space qualities (Mahdjoubi and Spencer, 2015).

Frankenberger Park and Bürgerpark were observed to have more potential with regards to making people feel; both places and people are diverse, and they allow for different encounters. In contrast, the Drescher Hof neighbourhood permits children's activities by observation of their parents, and parents' on-site supervision is associated with their perceptions of neighbourhood safety (Mahdjoubi, Spencer, 2015). Burghardt identifies play areas such as a 'relaxed field' where more survival and security needs have been met and had physical and social affordances (Burghardt, 2005).

According to Lester and Russell (2010), people need to feel that they have a right to public space. The playgrounds, both around the castle in Frankenberger Park and the Burgerpark, are not distinguished from other areas by the use of different materials or give the impression of just being for children's use. They do not give the impression of being only for persons of a set age and are located next to informal spaces. There are some, however, who in contrast argue that there are benefits from the separation of children's play area from adults (Tranter, 2011).

Finally, in terms of the different potential attributes of play space, Frankenberger Park and Burgerpark have more options than the Driescher Hof neighbourhood. The qualities of play provision include flexibility of physical elements which may enhance play experiences. These elements include different natural elements such as sensory experiences for sight, touch, and smell; as noted by Coffin and Williams (1989).

TABLE: ASPECTS OF THE PUBLIC SPACE WHICH ENABLE AND ENCOURAGE TO PLAY		
Research Areas / **Features of Places**	**Driescher Hof Neighborhood;** **Peripheral area**	**Frankenberger Park and Bürgerpark**
Attractive Environment	Cleanliness Green space Trees/Plants	Cleanliness Green space Trees/Plants Lack of Noise Well maintained Welcoming and relaxing
Opportunities for socialising	Far from City Centre Only Residents Food/Drink (very limited) Suitable for children play Neighbourliness	Close to city Centre Multiplicity Diversity (Age, ethnicity) Benches/Seating Food and Drink(good enough) Events and Activities Suitable for Adults to chat Suitable for children play Neighbourliness
Involvement in design	Playground spaces	Playground spaces Informal design (drawing ground, graffiti walls) Informal uses (seating on the stairs, eating in the playground)
Things to watch	Car parks Residental Area	View Other People Castle Railway track
Security	Feeling safe from attack/Robbery/assault	Feeling safe from attack/Robbery/assault Street lighting Visible police/staff presence
Safety and Comfort	Good paths (smooth, flat, wellmaintained) Safety from traffic (for only park area) Little air pollution	Good paths (smooth, flat, wellmaintained) Safety from traffic Nearby toilets (open, informal design) Cafe /food vending Little air pollution
Mobility	Proximity to home Existence and quality of footpaths Walkable	Ease of access to facilities/ amenities and open space Proximity to home Existence and quality of footpaths Walkable
Activities	Sitting, chatting, cycling, eating ice-cream, playing in the playground, pushing a pram	Sitting on the stairs, Sitting on the grass, chatting, playing music, Dancing, meeting, eating food, drinking, painting the walls, painting the floors, Playing football, basketball, doing extreme sports

Table 1: Comparison of the features of public spaces in the centre and the periphery of xxxx Source: Mahdjoubi, Spencer, (2015); Spencer, Williams, Mahdjoubi, and Sara, (2013).

9. Conclusion

In recent years, the topic of public open spaces has gained significant attention due to the ongoing coronavirus pandemic. The primary aim of this study was to analyse public space through the lens of play theory so as to understand the kind of space that fosters diverse actions and relationships between users and spaces. While play theory was initially considered only for children, it has now been expanded to include adults. However, studies involving adults are limited to designing playgrounds for them. Thus, this study aimed to view an entire

city as a playground and to explore possibilities beyond playground design. In the city of Aachen, selecting areas in both the centre and periphery was a useful tool by which to understand the playfulness of public open spaces.

With Aachen, the centre of the city is generally more conducive to spontaneous and creative actions than the periphery, owing to the former's environmental qualities, its social life, and perceptions of spaces. Spaces such as restaurants, cafes, museums, schools, and cultural venues provide comfort zones for the active use of public spaces. Compared to public open spaces in the periphery, the city's central parks offer new activities and actions that enable people to undertake riskier activities. Perceptions of playful actions expand with previous experiences and informal productions such as graffiti, seating stairs, and using spaces in different ways. While issues of security and comfort in parks located in the city's peripheral areas are better, the density of people, the diversity of actions, and the nature and number of informal productions make the central parks more playful as a consequence of the residential areas' proximity to them.

Play is not limited to swings and roundabouts for children (Children's Play Council, 2001) or games such as bowling, card playing, or chess for older people (Mahdjoubi and Spencer, 2015). When comparing central and periphery areas, we are not only comparing playgrounds but also public open spaces with diverse actions and various age scales. Identifying playful spaces provides a critique of instrumentally rational perceptions of public space design, and also opens up new niches for urban design principles which can address new needs and forms of social life (Stevens, 2007).

Acknowledgment

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