Hearing Children’s Voices: The Role of Public Space in Vulnerable Communities. The case of the Hills of Valparaíso, Chile

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Abstract. The relationship of childhood and public space is increasingly distant. Various factors, both social and governmental (from violence to the planning processes themselves), have gradually led to an environment in which what is public becomes alien. In this context, the analysis of public space and its relationship to children’s lives must draw attention to not only children’s perceptions of these spaces but also the role they should accommodate. In this respect, the research aims to identify children’s activity patterns and safety perceptions about public spaces in communities highly vulnerable to socio-natural disasters. To this end, three case studies are presented, corresponding to three public spaces located in the hills of the city of Valparaíso, a territory which, in addition to having a lack of green areas, is characterized by recurring socio-natural disasters such as earthquakes and fires. Additionally, these three public spaces were chosen according to the level of inclusion of the child population in their respective design processes. Six focus groups with children between the ages of 8 and 11 years old who study in educational establishments near the squares were conducted to identify the children’s perceptions of these public spaces and understand their roles as safe spaces amid anthropogenic or natural risks. The results show that the children feel more involved in and closer to public spaces when they have participated in their design; however, they do not consider these spaces areas of protection against socio-natural disasters.

1. Introduction

Tendencies for children to replace public spaces (PS) by indoor private areas are a worldwide issue. [1]. Compared to the 1970s, a significant reduction – 50% – in the time a child in Latin America devotes to outdoor activities has been found [2]. For example, in Chile children spend more than 60% of their time in closed, poorly ventilated spaces such as houses and schools [3]. There are various reasons for children avoiding the use of PS, including danger, litter, pollution, lack of hygiene and deteriorated infrastructure [4]. Certain studies show that the foregoing leads to degradation of their biopsychosocial development, as well as limited knowledge of their social and physical environment and thus a lack of knowledge about the benefits their environment can provide [5]. Therefore, it is necessary to make the perceptions and opinions of this group more visible, particularly regarding PS, including the uses that these spaces should accommodate. Therefore, it is necessary to make the perceptions and opinions of this group more visible, particularly regarding PS, including the uses that these spaces should accommodate.
As committed to in the New Urban Agenda\(^1\), integrated public space that is inclusive, open, safe, accessible, green and multifunctional, which in turn increases the resilience of cities in the face of socio-natural disasters, is envisioned [6]. With respect to resilience, the importance of PS during and after socio-natural disasters has been recognized [7]. The open space they provide and their ability to accommodate the population are two of their most important characteristics that earn them this recognition.

In vulnerable communities prone to socio-natural disasters, the child population presents greater degrees of vulnerability than the rest of the population [8]. Children’s wellbeing depends on the care, protection and opportunities provided by their families, communities and society [9]. However, their needs and preferences are often overlooked in decisions that affect their physical, natural and social environments. A certain invisibility of this particular group within the framework of public policies and programs aimed at the community habitat, as well as in measures aimed at promoting resilience to, mitigation of and reconstruction following socio-natural disasters has been observed [10].

Thus, this research seeks to advance in the understanding of children’s perceptions of PS and the role that it could play as a safe public space amid disasters of an anthropogenic or natural origin. To this end, three case studies of public spaces that differ in terms of their design processes were carried out. The first space was designed with children’s input and the second was designed for children; the design of the third is not connected with children. The three selected spaces are located in the hills of the city of Valparaíso, a territory that, in addition to having a lack of public spaces and green areas, is characterized by its vulnerability to urban fires and earthquakes.

2. Methodology
The methodological process involved the identification, comparison and in-situ evaluation of three public spaces that were selected according to the degree of child inclusion in their design processes. Then educational establishments near these spaces were identified in order to have access to the child population that studies in their vicinity.

Once the population to be studied was identified and characterized, a format combining a focus group and workshop was created. The theoretical basis for developing the first instrument is rooted in the obtainment of qualitative information via discussions aimed at studying the attitudes and reactions of children regarding PS [11]. Meanwhile, in order to crystallize the ideas of the groups and generate a design proposal in a play-based manner, the activity was complemented by a workshop in which the children made interventions in a mockup of each plaza, which was also a mechanism for organizing the information and visualizing the children’s expectations.

2.1. Selected Public Spaces
The first PS selected was Bismark Square (1), which is located on Cárcel Hill and lacks elements for children’s enjoyment. Then a second PS, Esmeralda square (2), located on Monjas Hill, in which there is a series of playground equipment, exercise machines and a multipurpose court, was selected. Despite having various elements for children’s enjoyment, children did not participate in its design process. Finally, the third selected PS, Esperanza Viva square, is located high on Placeres Hill. It is a square recovered by social organizations and neighbors who decided to transform a vacant site into a space for the entire population to enjoy. Here the development process included the child population throughout, in both design and execution. Once the public spaces were selected, nearby educational establishments were located, which were identified as EE1 and EE2 near Bismark Square, EE3 near Esmeralda Square and EE4 near Esperanza Viva Square (see Figure 1).

\(^1\) Document resulting from the agreement at the Habitat III conference held in Quito in 2016, which serves as a guide for efforts related to the development of cities.
2.2. Focus Group and Workshops

To conduct the focus groups, it was decided to form six groups (two for each square), each with n=10 children, via simple random selection. To make representative groups, the following criteria were used: representativeness in children’s age range, from 8 to 11 years old, a similar number of boys and girls in each group, residences in different areas of the community and different academic profiles.

With prior consent of parents and school authorities, each of the activities was carried out in the respective establishment, directed by a psychologist and attended by the research team and personnel from each institution. First there was an explanatory/conversational activity focused on introducing the topic of public spaces, which gave way to brainstorming and conversation about the expectations of each group, culminating with an intervention activity, the workshop. In the workshop, the children participating in the activity were able to generate design proposals for their respective squares and indicate the spaces in them they considered the most important in a play-based manner (see Figure 2). Thus, the work was focused on recognizing topics of interest, relevant elements to incorporate, important places in the squares for the children and other observations that arose during the course of the activity.
3. Results
A total of 62 children – 33 boys and 29 girls – with an average age of 10 years old, participated. The focus group results are presented in the following categories: 1) recognition of the square, 2) whether they use the square, 3) who they visit it with, 4) activities they do in the square, 5) how they feel when they are in the square and 6) its utility amid socio-natural disasters. Finally, the results of the workshop are presented, showing the places considered important in the squares and what the children would change or add.

1) All the groups immediately recognized their respective squares. However, there was a difference in attitude when the images of the squares were shown, with children from EE3 (groups 3 and 4) and EE4 (5 and 6) showing the most appreciation of the square and recognition of it and its name.

2) While most of the children who study near Bismark Square (groups q and 2) stated that they go to the square, there were some who indicated that they go there little or even definitely do not go. By contrast, the EE3 students (groups 3 and 4) unanimously stated that they constantly go to the square. It bears mentioning that EE3 uses the square for curricular activities such as environment workshops and physical education. In the case of EE4, as with the previous school, the students indicated that they go to the square on an ongoing basis, although a pair of children said that they do not go often because they farther from it.

3) In this section, as in the previous section, EE3 is important because it holds physical education classes in the square, improving the students’ relationship with PS. As the studied age group does not present autonomy, the children’s possibilities of accessing such spaces are typically dependent on a family member. This was expressed by most of the Bismark and Esperanza Viva groups, while in the Esmeralda Square groups the participation of the teacher is most important.

4) Play is fundamental in all the groups. It is most students’ first response, expressed immediately and spontaneously. Groups 3 and 4 of Esmeralda Square make an exceptionally recreational-athletic use of it, groups 5 and 6 of Esperanza Viva Square use it for recreation, with collective play prevailing, and, finally, some students of groups 1 and 2 go to Bismark Square only for functional purposes, such as to take the bus.

5) For all the groups the nearby squares are places where they experience feelings of happiness and pleasure. However, in specific instances references are made to indifference or fear, the latter case based on experiences in the squares.
6) In the Bismark Square groups there is not total clarity, with group 2 distinguished from group 1 by its more positive attitude toward the role of their square amid an earthquake or fire (see Figure 3). The Esperanza Viva Square groups also presented differences and were unable to reach a consensus on their square. Meanwhile, the EE3 students unanimously thought that their square would be useful in case of an earthquake and were divided 50/50 on its utility during a fire.

In general terms, most of the participating children had a positive attitude about the squares in case of earthquake, largely because they are open spaces. However, comments such as “you’d have to think carefully…there are some pillars that could fall” were made, alluding to the danger of vertical elements in their square. Meanwhile, opinions on the use of the squares during fires were divided, rooted in the fact that there is a significant amount of vegetation that could allow the fire to propagate more intensely or the lack of water, hoses, fire hydrants, etc.

Figure 3. Focus groups children’s responses.

In the workshops all the children responded well to what was asked and contributed various ideas. The two groups that worked on Bismark Square (1 and 2) coincided in naming the trees, exercise machines (which are used for play, since the square lacks a playground), the scenic lookout and point to take public transportation as areas of importance. With respect to what they would change or add to the square, they completely agreed on adding a playground. From there the ideas were varied, with group 2, from EE2, suggesting greater changes and more creative ideas such as a treehouse, ground lights and a doghouse, among others. This group also mentioned the safety of the square as a pedestrian crossing and public transit stop and adding a guard, among other ideas. The foregoing can be attributed to the educational model used by EE2 known as “constructivist,” which emphasizes the comprehensive artistic development of the student and environmental and heritage education.

Groups 3 and 4, from EE3, completely agreed that the most important places were the court, playground and trees. Regarding what they would change or add, they agreed on repairing the court, adding more shade structures and actions that would increase their safety amid vehicle traffic such as stoplights and crosswalks and other ideas. It bears mentioning that these two groups that worked on Esmeralda Square have full knowledge of it, recognizing and specifying the places with complete agreement. By contrast, the first two groups did not completely recognize the facilities in Bismark Square. In this case, there were discussions about the existing equipment, with some calling the exercise machines “playgrounds” and others correcting them, indicating that they are machines.
Groups 5 and 6 agreed on the most important places in the square, differing on one or two elements. Here the methodology used in the design of the square stands out, as the children agreed the importance of the elements that were designed with and for children such as a sandbox and the “trunks,” an intervention in wood carried out for children’s enjoyment. Their proposals also involve using the area for sleds on the hill and scenic lookouts above shade structures.

4. Discussion
While the aim of comparing the three case studies is related to the children’s appropriation of a PS being subject to the design processes of the studied squares, the research shows that the educational models of the schools prove to be as relevant as these processes in terms of facilitating the children’s interaction and integration with their community habitat. As expected, Bismark Square (which did not include the child population in its design), does not play an important role for many of the children who study nearby; however, one group – group 2, from EE2, sees great potential in it. Despite not using the square in its curriculum, EE2 uses a different educational model that involves the comprehensive artistic development of students and their educational and heritage education. As a result, this group contributed the most ideas, with intervention and design proposals that were also more creative.

Meanwhile, the groups associated with Esmeralda and Esperanza Viva squares, both of which included the child population in their design, demonstrated greater appreciation for and knowledge of them. Nonetheless, there were some differences between the two case studies. While the child population was considered in the design of Esmeralda Square – but not included in the design process like in Esperanza Viva – the groups of the first square demonstrated greater knowledge of it and a more positive attitude about its protective role in the event of a disaster. This is also attributable to the educational model of the school, which, by integrating this public space into its curriculum, manages to provide this population the possibility to better appropriate its square and interact with its community habitat on an ongoing basis.

The foregoing takes on even more importance when dealing with a child population from more vulnerable socioeconomic groups, which often cannot make use of the space if not accompanied by a teacher. Thus, both the design and the educational models of the schools influence the children’s appreciation for and of appropriation of these spaces and perception of the roles that PS can play.

5. Conclusions
For PS to take on a protective role amid disasters it is essential to generate good experiences for children in these spaces. If children do not have the opportunity to live in and appropriate public spaces through fundamentally play-related activities suitable for their age group, it will be difficult for them to recognize and appreciate the individual and social roles that PS can play. It is also essential that they be aware of these spaces and familiar with their areas, and the aforementioned roles must be taken into consideration when designing public spaces. Thus, both the design and promotion of the use of these spaces by the child population is fundamental. As this population is a group with low autonomy, the active use of public spaces is highly related to the nuclear family promoting it. However, for various reasons, the promotion of PS use by a family member is often not a given. In such situations institutional and community action takes on greater importance for children’s adaptation and appreciation of their immediate habitat.

As the case study addresses the hills of Valparaíso, a habitat in which socio-natural disasters such as earthquakes and fires are frequent, the child population under study exhibited basic notions of what to do in case of such disasters. This characteristic is embedded in the collective culture, including the child population; however, PS and its role amid such situations is not integrated in the same manner, at least in this population. Thus, PS design is not considering the conditions of the city and the potential of PS related to urban resilience. Therefore, based on the discussions generated in this investigation, it is suggested that public spaces such as Bismark, Esmeralda and Esperanza Viva squares have information on how to protect oneself during such disasters and explicit signage on safe zones within
them and review their infrastructure and spaces to verify that they provide protection (periodic emergency drills to instruct the student population on the use of these spaces could also be considered). All this demonstrates that the design of public space must contemplate a broad context of social necessities, conditions and the profile of the city, and that such a reflection and strategy have yet to be developed in theoretical and practical terms.

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