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free playing experiments: the user as a participant of the design process

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Abstract:

This article is intended to observe aspects related to the interaction of children from ages four to five, with each other and with their environment, by means of practical experiments in order to optimize the obtained data and generate observations on their participation in the process of designing spaces intended for children's play. Starting with a brief historical and theoretical contextualization related to the act of design, and addressing this as a linguistic and interpretative act, examples are presented that

serve, in the end, as a reference to the practical application of the experiments performed by the authors during the research. These dynamics were established by way of dialog and observation of children, and they permit an understanding of concepts derived from a collaborative research activity between the user, designer and the space. Based on these analyses, it was concluded that the process of designing spaces related to play needs to be rethought and improved by considering the participation of the users or actors involved, and the implementation of strategies for conversation and interaction with children.

Keywords: User-centered design, Participatory design, Designprocess, Free play

1 Introduction

The present study aims to propose considerations for the field of knowledge related to the act of design by generating theoretical developments that seek to discuss the participation of the user in the design process; and also by considering their development associated with human aspects from the perspective of the child as this is the nature of the user to whom the experiments were directed. Here we have the process of creation, its conditions and possibilities for experimentation, taking the human being and its interactions with space as structuring elements. The objective of this research is to observe aspects related to the interaction of children from four to five years old, with each other and with the environment, by way of practical experiments in order to optimize the data obtained together with the users, thus generating observations with respect to the participation in the process of designing spaces intended for children's play.

In order to situate the human being not only at the end of the system – restricted to the use of the space or artifact – and seeing this in a way that can enrich the design process, this article begins with a brief history with the objective of achieving a contextualization that speaks to the significance of user participation in design development. After this, two practical examples – *Coletivo Boa Mistura* and Lynn Kinnear's*Experimental Playground* – will be presented as references to ground this discussion seeing as they were experiences of spatial interventions that established their creative and hypothetical procedure on the interaction among designers, users and the community by exploring opportunities for participation, dialogue, listening and discussion. Lastly, five experiments will be presented that were realized by the authors at a Municipal School of Early Childhood Education (EMEI) in the city of São Paulo that systematize the perceptions of the authors in the field and that describe strategies for better comprehension by this specific population, for which the research is intended. These come from the observation of free play situations or were oriented by means of specific stimuli.

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2 Theoretical background

2.1 The human included in the design process

In the 1950s, methodological approaches named the "design methods movement" (Cross, 2001; Bayazit, 2004) sought to treat the act of designing in a linear and rational way, such that design problems could be solved by a sequence of actions, like a recipe that would serve as the basis for a multitude of situations. According to Bazjanac (1974), these projective models possessed a common feature, "[...] they all view the design process as a sequence of well-defined activities and are all based on the assumption that the ideas and principles of the scientific method can be applied to it" (Bazjanac, 1974, p.6). This logical viewpoint was profoundly influenced by positivist and functionalist thought (Broadbent, 1988; Rowe, 1987).

This influence lost its impact in the late 1970s when these methods no longer appeared to be sufficiently effective, seeing as society's problems became increasingly complex and heterogeneous and could no longer be solved in a generalized and pragmatic way. Bazjanac presents the criticism that, " [...] design is not a strictly sequential process, and design problems are 'wicked' and a linear step-by-step procedure applied to them cannot by itself yield any solutions." (Bazjanac, 1974, p.8). Facing design problems with a positivist bias would be a reductionist way of solving them, often based on a unilateral relation directed to the tastes and desires of the designer and in which the user has little influence or participates only in the final stages of development – as shown in Figure 1 where visual representation of the user's orientation is assigned to one of four distinct design methods.

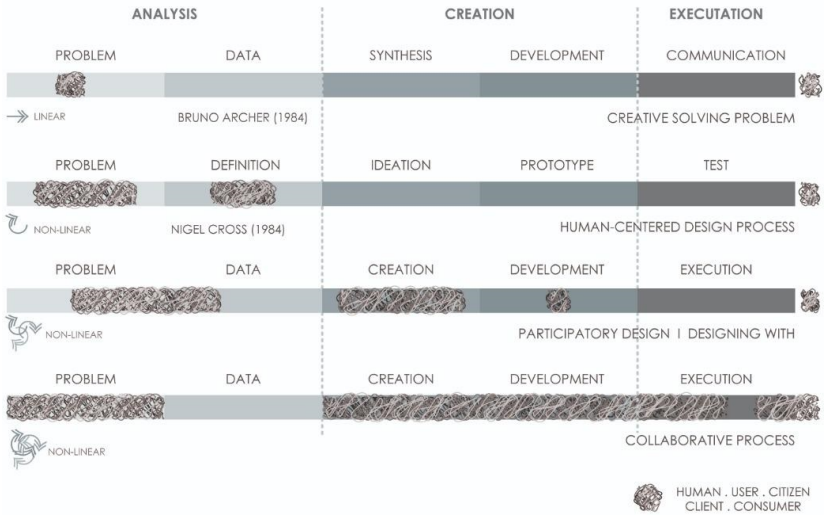

Fig. 1: Diagram of design processes and users, as elaborated on Van Patter and Pastor (2016). Source: Authors

After this, a movement was initiated to insert subjective questions from the users themselves into design processes, which is why hermeneutic phenomenology and ethnography began to be studied with the aim of incorporating more aspects related to human nature into design. Based on the works of German philosophers Martin Heidegger and Hans-Georg Gadamer, the authors Snodgrass and Coyne (2006) provide an interpretive vision of design in counterpoint to the rationalist and dogmatic scientism of design research, comparing it with a dialogue in which the designer talks with the situation of the design problem.

2.2 Design process as a language

Design is a dialogical process, that is, it is nonlinear and non-sequential, but it is also variable and transforms according to different situations and actors (Paschoalin, 2014). This article seeks to conceptually discuss design by understanding it as an interaction and augmentation together with the design problem, encouraging the participation of their respective users in the process. Gadamer affirms that conversation, "has a transformative force. Where a conversation succeeded, there was something for us that transformed us" (Gadamer, 1997, p.247). Schon (1983, p.79) introduces the concept of designing as a conversation in which designers are led to consider their viewpoints and design decisions in light of the appearance of unforeseen events and undesirable facts arising during development. Such questions eventually give rise to new actions and unprecedented ideas seeing as this dynamic in which, "the designer transforms the design situation and it responds by transforming the designer" (Schön, 1983, pp.150-151). Thus, the attempt to solve a problem can lead to a redefinition of the problem itself in a cyclical process that occurs when working with new elements that are added during the process of creation (Carneiro, 2014).

Design as an argumentative process, therefore, associates itself with language as a metaphor for the construction of dialogues, leading to concepts that relate theories from various areas in the practice of design. One of them is the interpretive concept of the hermeneutical circle, as it is a symbol for an interactive and dynamic relationship between the understanding of a design situation and the constant transformation by means of the actions of the designer and the user (Paschoalin, 2012). This placing of the designer on site can generate unintended consequences and new understandings by way of a cyclical and collaborative course of action and interpretation as dialogical exchange with the design's situation (Snodgrass and Coyne, 2006). By way of a conversation – between design, environment and users – the act of design progressively gains new levels of understanding and complexity. From this participation, new ideas and solutions are generated by way of constant exchange of information as long as the designer remains alert to the signs that emerge for interpretation. As stated by Snodgrass and Coyne, "to interpret something is to position it within a set of relations" (2006, p.8), and it is by means of experiments in the real world that answers can be found. There is, therefore, in this article an appreciation for the observation of the user's activity as an important source of information relevant to the act of design.

2.3 Interaction and development: observing a free play

Understanding architecture as the set of relations between a being and a place, the user lives in a "relational space" together with their surrounding environment (Cabral Filho, 1996). Beings have the power to transform their surroundings, which causes the space to acquire a transient and mutating

character (Almeida, 2014). According to Hugh Dubberly (2009), such interaction is a way of dealing with the activity of design, since all objects designed, "offer the possibility for interaction, and all design activities can be viewed as design for interaction. The same is true not only of objects but also of spaces, messages, and systems" (Dubberly *et al.*, 2009, p.69). Vygotsky considers that the activity of man in the world inserts itself through a system of social relations, which suggests that such aspects can be of great relevance to the design process when analyzed from a collaborative perspective that considers criteria dealing with the relationship between two or more people, and between people, and the artifacts designed for them (Vygotsky, 1984).

From the standpoint of Leontiev (2010) – Vygotsky's disciple – human interaction with the environment is essential for human development and learning, and especially in infancy. In this context, human activity becomes a source of data for the analysis of the individual and the environment in which it is inserted and as a form of understanding relevant aspects of the construction of consciousness and personality (Leontiev, 2010; Rodrigues and Campello, 2015). It is from the act of interaction with the environment that a child incorporates new ways of thinking about the world, their perception is transformed through the external stimuli, and they come to know new flavors, textures, odors, images and sounds. In infancy, the act of exploring the world is undertaken in a method of play in which discovering and learning become a great game filled with rules to be revealed or even broken (Mazzilli, 2003). This suggests that play can be defined as an important form of interaction, as a process of self-knowledge and operating in space, of manipulation of objects and artifacts, as well as its own social interaction together with one's peers.

In this way, the design process, seen as a dialogue with a situation associated with the act of play through the interaction of the user with the environment, indicates the theoretical aspects on which this article is based. Interaction is understood here as an exchange between sender and receiver, that is, a collaboration between its distinct parts integrated in a participatory manner. Such issues can be observed in practice in the two following cases that serve as a reference for the experiment as later presented in this article.

2.4 References for experiments

2.4.1 Interactions with users: *Coletivo Boa Mistura*

Man is, by nature, an interactive being that relates continually with people, with its surroundings, with built environments and with artifacts in general. Throughout their development, people interact with space in distinct ways, and in various scales and facets (Carneiro, 2014). These relationships with the environment and the people around them happen by way of people's senses, and it is from these that the process of comprehending the spacial environment begins (Figure 2). Using this strategy, Coletivo Boa Mistura, a multidisciplinary group, performs urban interventions through painting, be it on the facades of buildings, in community passageways (in favelas), on floors or walls, with the aim of aesthetically improving spaces and modifying the way people perceive them and how they relate to them (Boa Mistura, 2017).

Fig. 2: Intervention Luz nas vielas - *Boa Mistura*. Source: Boa Mistura, 2017. Available at: <http://www.boamistura.com/vielas-2> [Accessed 23 October 2018].

Coletivo Boa Mistura credits painting – a technique that is simple, low cost, easy to maintain and accessible to all – with the ability to evoke emotions in people and to make them part of the process, co-authors of transformation, able to change their environment and their relationship with their place, and to connect them in some way to each other. This is done by promoting the concepts of community, coexistence, participation and collaboration, inspiring with positive words, graphics and patterns relating to what already exists in the location, and which deserves to be exposed so that these values are reaffirmed, thus preventing them from being devalued or forgotten, as shown in the excerpt below from an interview conducted with them by the authors of this research.

> It is essential in our work that the result is identified in some way with the place and with the people who live there so that there really is an exchange between us and them. To achieve this, it is very important that the inhabitants of the neighborhood feel they are participants in project decision-making and are, in part, authors of the work (Boa Mistura, 2017, n.p., our translation[1]).

It is in the search to provoke positive emotions in the users of these spaces that the projects of this group are not based on an established pattern and are instead developed from the moment the group arrives at a location and begins to experience it and share it with the people who live there. From this interaction, they begin to build links and to identify how the users relate to this place, how they perceive it and what particularities it has, its, "most characteristic cultural manifestations" (Boa Mistura, 2017, n.p., our translation). Together with the observations and perceptions of the team members, they begin to think about possibilities for intervention in the space. The actions are therefore carried out with the participation of the users, being a means of reinforcing the establishment of affective relations of the people with their surrounding environment.

2.4.2 Stimulating and observing interactions: Experimental Playground

Using the actions of people as a data source for design is characterized as an important tool for the realization of more participatory actions between users and the designer. Observing children's play in order to generate cues for the act of design is an example of a strategy that enables a considerable amount of data to be collected. An example that stands out in the application of these concepts is the design of the exterior area belonging to Daubeney Primary School in London, entitled "Experimental Playground" and realized by Kinnear Landscape Architecture in 2000 (Thane, 2005). During the design of this project, children were not only seen as the users of a finished product, but as collaborators in the creation process through their actions and propositions. The development was documented by architect Lynn Kinnear, and this data collection phase was divided into four phases (Thane, 2005). .

Jacobs (2011) argues that a project should not be structured – regardless of its particularities or restrictions – solely and exclusively in explicit and stated knowledge, or in premises and established theoretical-conceptual precepts. Cities and spaces should therefore be thought of and proposed after deep observation. and be derived from those that use it daily (Jacobs, 2011). Architect Lynn Kinnear initiated the first phase of data collection with an activity in the open space of the school, without the use of any artifact to stimulate the interactions, and before any design intervention, in order to begin the process of observation from the natural daily life of children. She mapped and interpreted the activities performed there by briefly describing the most often repeated dynamics. In this way she sought to understand what the gestures and expressions meant in order to propose the patterns or the preliminary approaches of the design premises.

The second stage of data collection was characterized by providing the users with some elements that allowed them to interact with the space, and among those utilized were: traffic cones, wooden pallets and chalk to draw on the ground with (Figure 3). With these stimuli, the children modified the space in their own way, creating obstacles, patterns, challenges, shacks, ground murals, platforms and games. Lynn Kinnear sought to assess and observe how the children themselves created games, generated and transformed the spaces, and built sites of interaction. From this dynamic, principles and design premises were established. Relying on a limited budget, and in a carefully thought out manner, several of the possibilities proposed by the children themselves were recreated. Some elements were therefore inspired by the previously collected data and were implemented with success by the architect in the school's open space. In this way, opportunities and dynamics of distinct natures were made possible such as physical activities related to speed, challenge, strength and balance, games of make-believe and imagination, group games and learning situations outside the classroom (Figure 4). According to the data presented by the school teachers, this intervention was able to substantially diminish aggressive games that often ended in fights, and they also attributed improvements in school performance and student concentrationto these alterations in the space (Thane, 2005).

Fig. 3: Stages of the experiment realized by the architect of the school´s patio. Source: KLA, 2018. Availabl <https://kland.co.uk/projects/daubeny-primary-school/> [Accessed 23 October 2018].

Fig. 4: Finished project of the Daubeney Primary School playground. Source: KLA, 2018. Available at: <https://kland.co.uk primary-school/> [Accessed 23 October 2018].

3 Experiments for data collection: interactions in Glicério

From the precepts related to the act of interaction associated with free play, experiments were conducted to observe the users more closely, and with the minimum possible expectation (Jacobs,

2011). Listening to the children, understanding their formal and visual routines, their experiences, and their relations with the city and the public space figured as opportunities for learning about what the users sought, and how they explored the environments and used them, served as an experiment on how the designer approaches the user and increases their participation in the design process. How can children collaborate in an effective way in the conceptual design of spaces made for play?

The experiments were conducted over fourteen months at a Municipal School of Early Childhood Education (EMEI) in the central area of the city of São Paulo: Glicério, a low-income neighborhood with children between the ages of four and five who live in precarious housing conditions or in a tenement situation (Figures 5 e 6). This age range was chosen because this is when learning takes place, essentially, through non-formal education, that is, through experience and perception, through social and environmental interaction, and by means of free play. According to Winnicott (2005), it is an age group in which human beings have a way of existing within themselves, and they relate to other living beings and objects as if they were relating to themselves, in addition to going through accentuated cognitive, physical, emotional and linguistic development.

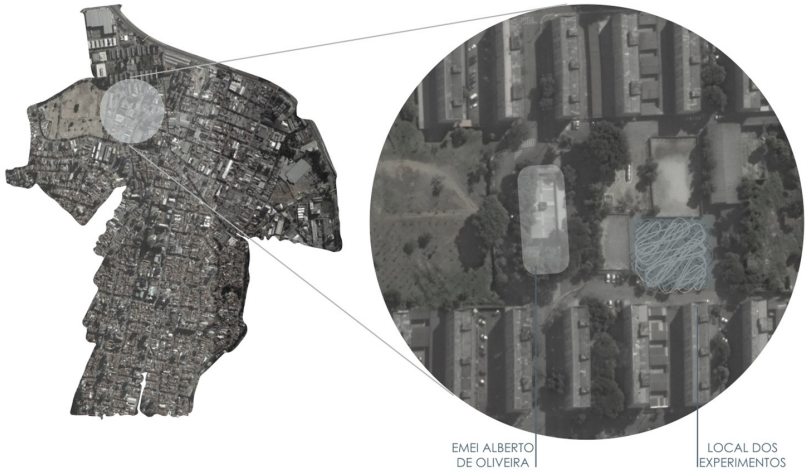

Fig. 5: Location of the experiment in São Paulo city central district, Brazil. Source: Authors' collection, 201

Fig. 6: Images of the place where the experiments were performed. Source: Authors' collection, 2018.

The data records were made through the use of fixed, wide angle, and mobile cameras mounted on child bicycle helmets used by those who voluntarily participated, for as long as they wished to, with the intent to obtain, from their perspective, the manner in which they perceive space, how they interact with it, with its elements, and with other children (Figure 6). This possibility of filming from various points of view revealed itself to be of fundamental importance, as shown by Klisys (2010) in narrating a dynamic in which parents, children and educators built a rocket: at the moment of applying laminated paper in insufficient quantity to entirely cover it, a conflict between the adults and the children arose because the adults wanted to adhere it externally, while the children emphatically argued that it should be applied on the inside of the rocket. This discussion shows us that the adult has the viewpoint of an observer, while the child has the, "point of view of those who will participate in play, and therefore will spend more time inside the ship [...] demonstrates how much the subtleties of the way the child conceives his/her space in order to play with it have escaped our observation and how much we have to learn to include his/her point of view " (Klisys, 2010, p.71, our translation).

The experiments were divided into five activities. In the first developed dynamic – **experiment *A*** – the space did not undergo any physical intervention and the children were invited to play freely. They began their exploration of the space, running in circles, organizing themselves without any clear or defined rules and, at times, they played tag. After some time, after the euphoria diminished, they began to try out the space and its elements, talk among themselves and discuss other ways of playing in the space, such as climbing the gates, climbing precast concrete structures and throwing stones. Table 1 shows a table of the activities performed by the students which are divided by an average of the time and the number of children identified in the area. In relation to obtaining this data in the field, this table was made based on the SOPLAY[2] system, and it synthesizes the information that underpin the other four subsequent activities the users undertook (Mckenzie, 2012).

play types	actions / situations	2min	5 min	10 min	15 min	20 min
MANIPULATION AND EXPLORATION OF THE ELEMENTS OF SPACE	collecting pebbles	2				
	climbing the light pole					
	collecting pebbles for throw them				10	6
	playing and walking with the puppy and his owner	1	8	11	1	1
	exploring the colorful fabric on the floor and stirring the glue					5
	marching on the colorful fabric on the floor				1	
LOCOMOTION AND FRUITION	running and enjoying the space	5	3	1	1	
	running between the colored fabrics on the floor and jumping on them					
PLAY WITH RULES	joking sitting on the colorful fabric on the floor	5				
	fleeing or chasing the child who was wearing the cam-helmet		2	1		1

Table 1: Summary of part of the data from experiment A. Source: Authors' collection, 2018.

In the following collection – **experiment *B*** – colored pieces of non-woven fabrics (TNT) were utilized, cut into colored spots, applied to the ground with glue in non-geometric forms, to observe and analyze how the children would relate to the space and its new elements, how they communicated among themselves and if, at some moment, play or games would arise. All of them transformed, in some way, their euphoric dynamics to occupy the new space (Figure 7), and in some cases the children sat or lowered themselves to touch the colored fabrics with their hands, as if stimulated to test their tactile senses. As an example, the blue spot – the largest of them all at nine meters in length – was defined by one of the children as a "river", which generated into games such as a catwalk among the girls who marched from one end to the other singing, as well as group activities such as playing with their hands, sitting on the fabric, clapping and singing.

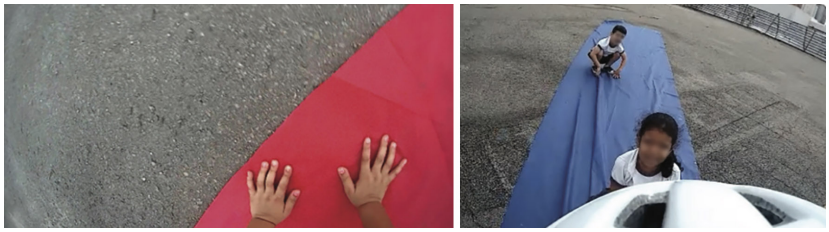

Fig. 7: Examples of images generated from the perspective of children. Source: Author's collection, 2018

Experiment *C* was inspired by the experiment conducted by Willet (2014) regarding the creation, by his own children, of games by placing hula hoops on the ground during school recess. In this particular case, sixty hula hoops were offered to the students. After the initial euphoria that infected them and impelled them to run frenetically through the space – in a movement eager for enjoyment – the more conventional use of the toys was observed with greater frequency: the circular movements of the hula hoop about the waist or articulations of the body. After approximately six minutes, one child suggested to four other girls, "Let's make a trail?" in an excited tone. The children invited to play began to collect the hula hoops that were still unused, since some had been returned by children who did not see possibilities for use and who preferred to return to running and exploring the space. In this way, they managed to organize a great walkway involving approximately thirty-five hoola hoops. Children who did not participate in the construction participated in various forms of play: running, jumping, walking around, and crossing the trail perpendicularly. Klisys (2011) cites the construction of play as an end in itself as a very neglected part of those who design or propose spaces intended for children's play. During the dynamic, innumerable situations were constructed by the children to interfere with the space, especially with the floor, after which, each reorganization of the hula hoops suggested new explorations. It was observed that such activity allowed the users to realize an exercise of collaborative design and construction, raising ideas, creating responses, inventing narratives and, through the measure of time, it was possible to understand that the users spent more time constructing the play situations than effectively experiencing them.

Experiment *D* gave the children the possibility of drawing on the floor. Initially, they were invited to draw with chalk however they wished, how that public space – degraded, barely used by people and without equipment – could be. They were asked to draw what they would like to see in that place, what elements, treatments and equipment they would like to have. It was noticed, however, that the children were not very keen to draw what they imagined for the place. The autonomous activities were summarized into: a) manually breaking the chalk or letting it fall to the ground to watch it break; b) picking up the materials and separating them into the groups they drew, placing them on the floor and re-placing them, manipulating them; c) interest in the materiality of the chalk, which was identified by the activity of a child who decided to roll it between his hands to perceive how it colored his palms white.

In this scenario, observers then decided start walking throughout the spaces and encouraging the children to say what they would like to see there. Their statements spoke of equipment common to the traditional playgrounds, such as a slide and swing, or rides from amusement parks that charge admission, such as the Ferris wheel. It is interesting to note that some answers were linked to elements that could be manipulated, such as sand and garden creatures. The form of expressing oneself in relation to sand shows the potential of the elements that can be manipulated by the children. These are relevant to them because they are transformed by their actions, as if they create "a toy of sand."

In **experiment *E***, colored adhesive tape rolls were offered to the children so they could modify the space by applying it to the ground with the aim of creating something with which they could play. Some children worked as a team and some alone, but all of them pursued something. Among the revealing things observed, the users followed their wills, intuitions and desires in the creation of a new spatiality. In a defined design exercise on how to deal with the material, questions arose in respect to limitations and possibilities in the use of the tape, as well as what they could externalize with it. It was possible to notice through their gestures and looks and the diligence they applied to manipulating the artifacts offered for developing new forms of play that the children wanted and were interested in and with pleasure, if possible, to appropriate the space and its elements to explore it with what was at hand and experience it in the most intense way possible: by means of playing (Moore, 2015). Moore (2015, p.26, our translation) reports that, through these opportunities, children strengthen, "their emotional attachment to their places".

From these bands of color, it was possible to observe the children interacting with the space in distinct ways, responding in some way to the abstract stimuli created by them. Only a few compositions were named by them, such as *train track* or *skateboard ramp*, but all were, in some form, explored by the children, as can be seen in the sequence of images in Figure 8 in which one of the boys (wearing the red shirt) stands up, looking at the ground, enthusiastic to try out what he has just built. The evidence of this situation was given by another child – with a camera installed in his helmet – who observed with attention and interest what happened. After the period of construction and experimentation, they remained in the space to play freely and it was possible to observe that the majority of the children ran throughout the space playing tag and interacting with the tape, trying to align their paths to the colored lines on the ground or, by opening their arms, to keep their balance.

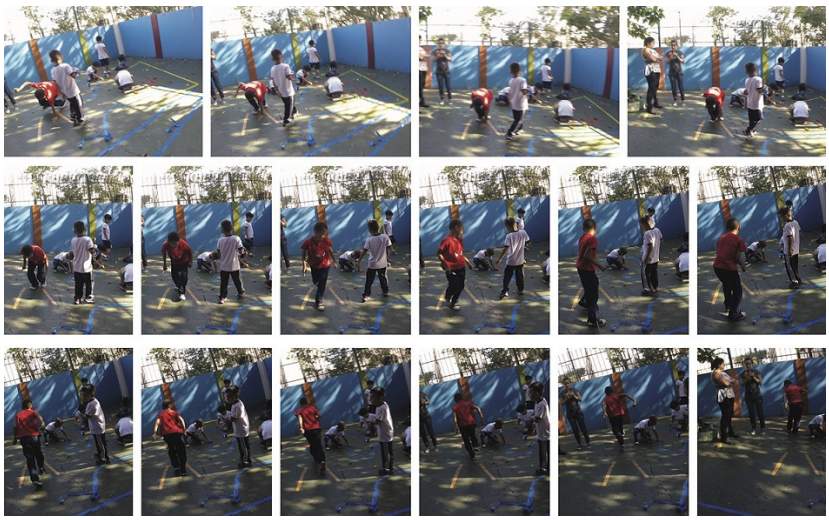

Fig. 8: Record of sequential images made by the helmet camera. Source: Authors' collection, 2018.

4 Discussion

The conception of these activities with children as opportunities for interaction and dialog in order to understand them more deeply was established as a dynamic process of exploratory inquiries in which the experiments were not completely defined. In them, the children were contributing and collaborating according to their responses to the stimuli in preparation for their activities which followed. They evolved in the sense of gradually offering more autonomy to the children, and, consequently, more material for the present study. By following the Anthropology of Childhood, a fluid, multiple and non-static perspective was adopted whose practices of data collection together with users were rethought, and some proposals for activities were reformulated with and based on the children's own voices, and on their pursuits and needs (Friedmann, 2011). This is a proposal for a participatory experiment harmonized with complex contemporary issues: flexible, holistic, and drawing on intuition, without

comprehensive planning and sufficiently open to explorations and interpretations, it is an example of the symbol of the hermeneutic circle: a constant transformation of the ideas of the designer from the view of the user and from the design situation (Paschoalin, 2012).

Research by way of observing action, which is gestalt by nature according to David Gray (2004), is a way of encouraging social changes through the scientific recognition of the experiment's value in the creation of knowledge. Perhaps this relationship between those who design (designers) and those who use a design (children) can be seen as a fortuitous dialogue, as articulated in this article by way of experimentation and participatory play workshops. In these interactions, the children were seen as partners who instigated the rethinking of concepts, deconstructing paradigms with an "initial point of view, not habitual, not accommodating, with sensitivity very much in tune with their desires" (Klisys, 2010, p.69, our translation). These questions reverberate directly and deeply in the design process, going against the propositions based on guidelines, known as scripts and directions, which determine objectified, generalized and pragmatic solutions (De Visscher, 2017). Therefore, design is advocated in accord with the users' voices through the strategies of listening and participation, on a case-by-case basis, and with the agents involved.

Considering more open and participative processes, new methods and tools and a more careful and sensitive look at the gaps and voids between the professional and the user, is perhaps only the beginning of a trajectory in which both could get along more, establish links, and bring together their repertoires and views (Glenn *et al.*, 2013, Nicholson *et al.*, 2014). In the given examples and the experiments performed, it was noticed that many of the activities went as planned, but that the children also perceived attributes that were not predicted by the designers. It was also possible to observe that they used most of the time exploring and creating their own playful situations, which demonstrates that there is still much to learn from the way children experience the world. This analysis seeks to contribute to the design process of children's recreational spaces and to report on the lack of opportunity of this nature for the users to undertake transformative action with, as the Anthropology of Childhood affirms (Morrisey *et al.*, 2015). During the experiments and interactions, the children's speech showed the inventive capacity they possess, what they pursued, how they perceived the city, and how they would like it to be more open to play.

5 Final considerations

When a space is designed, a child's perception is often subjugated to that of an adult, in regard to creative development. In order for play spaces to be open to the will to manipulate, create, transform and experience, this kind of space's design process needs to be rethought by way of the implementation of new and collaborative ways of conceiving them, either with the participation of users or from it. It can be noted from the results of this article that much has escaped the eyes of those who propose spaces and equipment related to the act of play since the children perceived attributes that were not predicted by the designers.

Information in respect to new methods that provide data on what children pursue and what drives them are genuinely, as a rule, rarely considered in the creative processes of architects and designers. It is therefore concluded that breaking paradigms implies making the design process more democratic and sensitive to people. It is important that the design community positions itself in favor of democratizing design, and that richer and deeper opportunities for participatory actions that foster collective well-being can be created. This article is a space for observations on this theme, and considers essential the use of dialogue in design, with more interaction between spaces and the people for which they are designed, thus validating the involvement of users in the process. According to the argument of Margolin and Manzini published as a manifesto in 2017 regarding the relationship between democracy and design: "we need to do more now than just design in a normal way" (2017, n.p., our translation), that is, via traditional design methods that are no longer sufficient.

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1 **From the original in Spanish:** "Es esencial en nuestro trabajo que el resultado se identifique de alguna manera con el lugar y con la gente que vive en él, para que pueda realmente hacer un cambio y relacionarse con ellos. Para lograrlo, es muy importante que los habitantes del barrio se sientan partícipes de la toma de decisiones para el proyecto y en parte autores de la obra" (Boa Mistura, 2017, n.p.).

2 *System for Observing Play and Leisure Activity in Youth - SOPLAY* - is a method used to systematize the data relating to the occupation of space by children through the use of recorded data with a fixed time interval which act as a snapshot of the situation (Mckenzie, 2012).