

ENVIRONMENTAL PERCEPTIONS OF CHILDREN WHO LIVE IN DEGRADED SPACES IN THE AMAZON

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Introduction

The Amazon of the twenty-first century deconstructs the once prevailing myth that nature there is largely preserved and there is environmental and social homogeneity (BRUNO; MENEZES, 2012; SANTOS *et al.*, 2012). The Amazon region is both rural and urban and has forested and agricultural regions as well as cities. Like other Brazilian regions it is riddled with vulnerabilities, although it stands apart for the immensity of its flora, fauna and rivers. While transformations are intense in the forests, they may be more intense in the cities, and are the result of social and territorial conflicts that manifest a history of imbalance in social demands and in the support capacity of the ecosystem.

Various studies point to the need to confront the degradation of environmental resources in cities (HERCULANO, 2000; MARTINE, 2007; JACOBI, 2008; GONDIM, 2012). One of the many problems is that waterways that had traditionally been useful for the circulation of goods and services, now unfortunately serve as sewage channels for domestic, commercial and industrial waste. Thus, the biological characteristics of the fluvial elements that shape, cross or embellish urban regions are altered when cities are formed with inadequate urban planning (MUCELIN; BELLINI, 2008; OLIVEIRA, 2011).

People build their homes in these fragile spaces, they live and build dreams, expectations and families, whose choice is imposed by the way society is organized today (HERCULANO, 2000; CARTIER *et al.*, 2009). This spatiality is shaped by an exclusionary sociality that manifests little solidarity, which distinguishes and values or devalues people as a function of the place that they inhabit (FISCHER, 1994). Thus, analyzing a place can help to understand its residents, and in the final analysis, the socio-historic character of society. Places have external and internal components. People carry places in their bodies (MARANDOLA JR; MODESTO, 2012), because the process of construction of inhabited space reflects and embodies within individuals their position in the world, their experiences and feelings (CAVALCANTE; NÓBREGA, 2011).

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By constructing a space of residence, the occupants wind up identifying with it, appropriating from it and attributing to it a sense of belongingness (WIESENFELD, 2001). In this way, the city and its places become the stage of historic productions of countless social groups, symbols, manifestations and identities (LEFEBVRE, 2001; CARNEIRO and SANT'ANNA, 2009), and incorporate spatial and temporal experiences in personal and social memories. The socially constructed significations and symbolizations recognized by groups may be held common or be contradictory in relation to a specific environment (ARANGO; RENDON, 2008). The need to have a place corresponds to feelings of ownership, power and social status, but also to an openness or restriction of communication with the other (LEMOS, 2010; TUAN, 2013).

Contemporary cities suffer from excessive socio-environmental problems that are continually aggravated. In cities of the Amazon region, as in other Brazilian cities, which have growing social and environmental problems, residents experience this process by interacting and coexisting with this reality of environmental and ecological fragility, shaping it and being shaped by it. The populations that suffer most are usually those with low incomes, who are excluded from the benefits and goods of citizenship.

This study focuses on impressions of socio-environmental alterations to an urban lake that was once clean and the object of pride of the population of Parintins in Amazonas State, but which is now suffering from anthropic actions. Water is an important element of social identity in Parintins, which is an island called Tupinambarana, distant 369 km east of the state capital of Manaus and located on the right bank of the Amazon River. The city encompasses lakes of various sizes including the lakes of Macurany, Paranema, Aninga and the larger "Lagoa da Francesa". In fact, in the Amazon, it would not be erroneous to ensure that water infiltrates endless meanders in this central land, water infiltrates the centre of the island in endless meanders, creating a hydric network that gives identity to the city and its inhabitants.

With migrations from other regions, especially rural areas, Parintins has had strong demographic growth, and now has 112,716 inhabitants (IBGE, 2016). Like most cities, it was not planned to meet high demand and countless social problems have arisen that overtax the physical environment, which has been occupied by residents, streets and landfills. This took place by the occupation of peripheral areas around waterways, which compromises environmental resources.

In Parintins, the Lagoa da Francesa became a concrete example of human action against nature. Once a pleasant and admired landscape, the aquatic life is now perishing and agonizing. The Lagoa da Francesa is located in the eastern portion of the city and each day receives people in transit and domestic, commercial and industrial wastes, as well as that from boats that travel the rivers, a process that has been modifying the natural characteristics of the water (KIMURA, 2011). Thousands of people live along its banks and use this environment as if it still was of good quality, while increasing its pollution.

Many adults still remember the proud landscape of the past, but how do children perceive this environment and the life that takes place there? Are they oblivious to the environmental degradation? Do they perceive the risks that come from this inhospitable environment, even if they are allowed to enjoy the (false) benefits of the lake as a place to play?

This study sought to investigate children's environmental perceptions of the ecological characteristics of the Lagoa da Francesa, the social uses made of the place and of the meanings of this situation.

Environmental Perceptions of Children

Environmental Perception reveals the relationship between social behavior and physical reality, or that is, the inter-relations between human beings and the natural or built environment, and their expectations, judgments and conduct in relation to the daily use of the space. Del Rio and Oliveira (1999) define environmental perception as a mental interaction of individuals with the environment that takes place through perceptive and cognitive mechanisms. The perceptive mechanisms are triggered by external stimuli that are captured through the five senses, while the cognitive mechanisms involve a mental elaboration that transform and resignify the sensations based on sociocultural characteristics and experiences.

Environmental perceptions are established in a dynamic, yet gradual process that begins in childhood through stimulus from internal elements (psychological and genetic) and external ones (environmental and social). If in their early years children may be slow to perceive the surrounding environment, this perception is gradually expanded with the help of adults and in the spontaneous experimentation with the world (PIAGET, 1967, 1973; TUAN, 1980; VIGOTSKY, 2007).

Children live in an environment that is organized by adults and receive the world bit by bit, and little by little reconstruct it through these references, transforming it based on their own conditions (CRUZ, 2011). In other words, children are active beings in the world and their environmental perceptions are unique to each one, but they are the fruit of a process of intersubjectivity based on meanings that others create and are creating (TOREN, 2010). In this way, the inclusion of children in this study is not a mere preference, but was made because children are vulnerable to a wide variety of socio-environmental problems to which they are exposed. Moreover, studying children by verifying how they are subjectively constituted through a particular environment helps to understand society itself, the relationship between people and the environment, and their forms of acting and thinking about the environment.

Various studies indicate that children's contact with nature contributes to the development of an interest in and concern for the environment. This contact also helps to generate the physical and mental alertness needed for the development of autonomy. Contact with nature provides richer and more complex opportunities for learning and play, stimulating the curiosity of children (CARVALHO; SOUZA, 2008; CHENG; MONROE, 2012; PERES, 2013). The children's' environmental awareness has been recognized as a key element in the development of an inclination, potentially throughout life, to care for the environment (DUHN, 2011; WILSON, 2011; ENGELMAN, 2016). The involvement with the place and space lived in represents aspects people use to think about themselves, about others and about the world (APPLEYARD, s/d).

Environmental impacts limit this relationship, given that living near degraded natural environments such as polluted lakes can leave children with distorted concepts

about the availability of environmental resources and their biological characteristics. Unfortunately, many families face situations of social and environmental vulnerability and children become the most penalized groups.

When searching for an analysis of the perception of the urban environment lived by Amazonian children, the discussion becomes relevant when pondering the impacts of the degradation of nature, represented here by water. From the small resident inhabitants of the surroundings of a specific landscape of the Amazon Region, whose name is Lagoa da Francesa, internalized and understood by all those who inhabit its banks, but which hurts those small ones more intensely. The children's environmental perceptions show how they appropriate, use and construct meanings of an urban Amazon ecosystem that is far from being restorative.

Method and Techniques

Drawings made by children were used to investigate their environmental perceptions, because the designs present a graphic language that allows accessing the children's imaginary about the socio-environmental universe (PROFICE, 2010). Children's drawings materialize their unconscious through symbolic expression and encompass a relationship of identity with that which they symbolize (PEDRINI *et al.*, 2010). Design offers children a form of communication that shows how they position themselves in relation to the world, which leads us to understand it as a system of representation (COX, 2007; ALMEIDA, 2011; RABELLO, 2013). The drawings represent the physical and social space in which the children are inserted. Although their motor skills are still limited, this can be compensated for by soliciting complementary comments from the children about their drawings.

The research was done during the second half of 2014 (CAAE 36936514.0.0000.5020 - Parecer 824.497). The study was conducted in the second semester of 2014 and 120 children participated (60=F; 60=M), ranging in age from 7 to 13, who were residents around the Lagoa da Francesa and students in the 1st to 8th grades in two neighbourhood elementary schools. Each child received a sheet of A4 paper and a black 2B pencil and was asked to design "Lagoa da Francesa and what is found there and what the children can do there". The designs were made collectively in a classroom, where their desks were separated to avoid copying. The children drew for about 30 minutes. After they made the drawings, each child was individually called into another room to comment on their design and to express their perceptions and understanding, which lasted about 10 minutes per child.

The data was subject to qualitative analysis associated to the children's designs, responses and comments during the interviews. Content Analysis was used to work with the information obtained (BAUER, 2010; BARDIN, 2011).

Results and Discussion

It was found that these children perceive, react and represent their surroundings in a different way. The same place is perceived with different aspects that, constituted from the social use, form singular meanings on the Lagoa da Francesa and its socio-

-environmental condition, be it of positive or negative form (Figure 1 and 2). In this sense, Lima (1989), argues that a single space can encompass different environments, and that similar environments do not signify equal spaces.

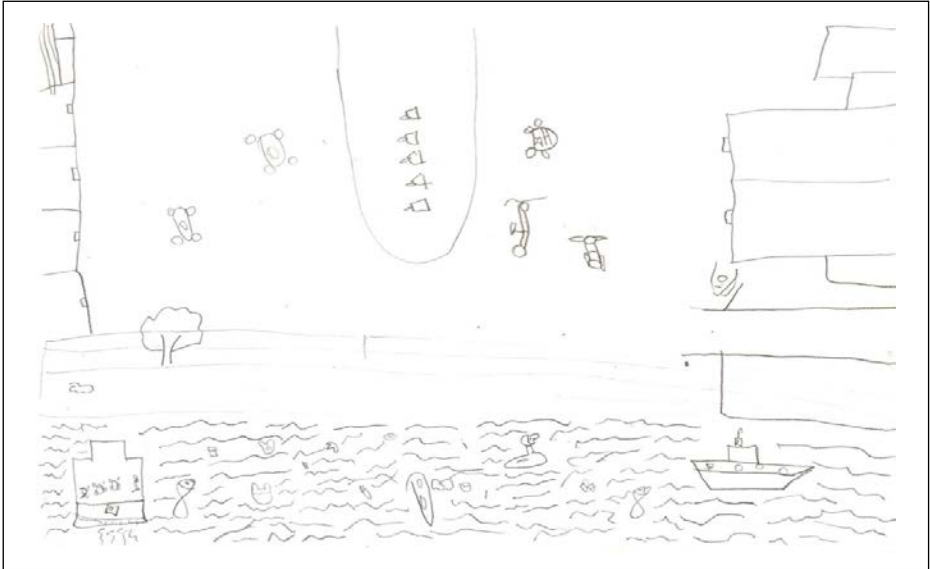


Figure 1: Drawing of the Lagoa da Francesa as a place of pollution (13-years-old girl)



Figure 2: Drawing of the Lagoa da Francesa as a place of recreation (7 years-old girl)

The content analyses identified six different representative categories that are subjacent to the types of uses and meanings given by the children to Lagoa da Francesa: a) *a Polluted Place* (22,5%); b) *A Place of Transit* (19%); c) *a Place of Flooding* (17,5%); d) *a Place for Recreation* (14,2%); e) *a Place for Commerce* (13,4%); f) *a Place for Living* (13,4%).

A Place of Pollution

The *Lagoa da Francesa (LF)* seen as a *polluted place* indicates a troubling reality found in various Brazilian cities, the release of objects into fluvial environments. The LF is characterized by degradation by 22.5 per cent of the children. They perceive that the ecological characteristics were altered due to improper use, which affects all those in the surroundings. The drawings present evidence of solid wastes (organic and inorganic) disposed in the space. The children express that this leaves the environment fragile and limits the possibilities for using the lake. Thus, the meanings they express are based on negative aspects of the space.

In this category, the lake is a place with many objects that catch the eyes of the observer and it is thus conditioned by external actions. As one girl said, “*The water of the lake starts clean, but when they eat candy, they throw garbage. Mommy picks everything up, then people go there and throw things again*” (F, 9 years). Here the environment is identified in its degraded form, which brings unpleasant sensations to the child: “*There are lots of bags in the lake, lots of garbage and its smells very bad*” (M, 7 years). In this regard Giatti (2009) argues that from the moment that residue is generated by the individuals after satisfying their needs, the problems begin and multiply to the degree that materials are thrown there that barely decompose.

In this perception of the lake, the negative characteristics are aggravated by the actions of the residents. The LF comes to be, due to the objects thrown there, a place of restricted access, and for this reason one boy said, “*I do not want to go into the water because it is dirty. Once an adult fell into the water, they took him from his home and he was sent to the hospital*” (M, 11 years). The boy understands that the lake is improper for direct use by the body, and rejects this contact and its possible risks. The subjects that live there are not only vulnerable to the degradation, but are confined and isolated from the natural environment.

The LF also breaks with a cultural characteristic of the Amazon, because the children who live nearby cannot go into the water, many do not know how to swim. Because the lake is not clean enough to learn to swim, the parents warn them of the dangerous situation: “*My mother doesn't let me go into the lake. She says that the waters are polluted, there are bacteria and it will make me sick!*” (F, 11 years). In the terms coined by Tuan (1980; 2005), the subject has a “topophobia” for this place, which represents a landscape of fear, which refers to both psychological states as well as the real environment. In this way, for the children, the LF is a landscape that manifests a hostile sensation: “*I am afraid of this water, I am afraid that there is something there*” (M, 10 years). Tuan (2005) affirms that death is a new fear, that children are more aware of it than many adults can imagine.

To be in the Amazon and live around a lake that is a restricted space, represents a transformation in the sociocultural behaviour of the people who live here. Fischer (1994) affirms that the

space as a cultural system expresses social values. If the water “is no good”, individuals created with this perspective will have an aversion to this element and new conditions will be postulated on this basis.

Place of Transit

The Lagoa da Francesa was described as a *place of transit* by 19.2 per cent of the children. This characterization refers to the possibilities for mobility that the waterway offers. Thus, the aggregated meaning is of a space of passage, which is essential for linking one space to another, which is used by people who may be known or not, because “*people come here from all over*” (F, 12 years).

The Lagoa da Francesa is a place of movement, of coming and going, of arrivals and departures whether by land or by water. This intense flow is favoured by the waterways and this movement stands out in the eyes of the children: “*I know how it is because every Sunday we go to the Vila Amazônia and go through the Lagoa da Francesa*” (F, 12 years). The distinction of the lake as a place of movement, inserts itself in the typology of parallel social spaces, in the representation of interstitial spaces, in which it serves as a place of passage. It is the idea of a threshold that assures the ritual passage of one place to another (FISCHER, 1994). The interstitial space expresses a function that articulates an inside and an outside, in which there is a part of social life: “*Here is a man in a boat going to travel*” (F, 11 years).

Living in an Amazonian environment, rivers, lakes and lagoons become essential to travel because navigating is necessary and possible. (TOCANTINS, 2000). This situation on the LF is corroborated by statements such as “*I always travel by boat on the lake*” (M, 12 years). Nevertheless, this travel is not just cultural and inoffensive, this means of transportation is another concern, because, “*the boat effluent pollutes the river*” (M, 7 years), “*the river water is polluted by the smoke from the boat*” (M, 11 years). Both children perceive that there is a relationship between the means of transportation and the pollution of the place, and that the poor condition of most of the boats is associated to the environmental irresponsibility of the travellers.

The LF is a scenery of intense circulation, both in the streets and in the waters. For this reason, the children seem to understand that it is difficult to control this situation: “*Lots of times I have seen people in the boats, people who pass by on motorcycles, throwing bottles*” (M, 13 years). The perceptions of the children include judgments: “*This is garbage, that one day I saw a man in a boat throw in the river*” (F, 10 years).

This reality provokes in the children a latent concern for the consequences of this behaviour: “*The fish can die there, they can die because of the man who does this*” (F, 10 years). In the same way it alters the sense of attachment to the place: “*I think its very sad because they throw garbage in nature, but one day, I know that nature will not be sorry for them, just like this flood that came and destroyed the houses*” (F, 13 years). For Fischer (1994), this element of transit allows individuals and groups who use the space to make it an environment where political demands may potentially be raised: “*One day we have to produce pamphlets, [with] things that we can say about the risks and benefits that garbage can cause*” (M, 13 years).

As is noted, the river is an extension of life, a territory of movement that is already present in the children who live in this space and who are already concerned with the ecological degradation that people cause. Aspects of concern are found in some children that lead to a desire to transform this reality. Seeds of behavioural change appear to be being cultivated in such a way that one sees in the children the beginning of an economic, political and cultural transformation, which in turn is unthinkable without an alteration of the awareness and of the behaviour of these people (LEFF, 2008).

Place of flooding

The LF is a *place of flooding* for 17.5 per cent of the children. The cycle of waters (when the river is said to be either high or dry) is an Amazon phenomenon, which is considered as natural by the residents. Tocantins (2000) affirms that the river fills the lives of the Amazon people with psychological motivations and that this determines social directions and trends, creating characteristic types of regional life.

It is important to distinguish between high waters and flooding. High waters are expected at certain times of year (MIGUEIS, 2011) and for this reason activities are programmed to face them. However, flooding comes with rains higher than normal and often brings damage and suffering. The flooding is experienced with greater intensity in the urban areas due to the irregular occupations that alter the course of the rivers. The silting caused by the lack of riparian forest and the accumulation of garbage in the fluvial environments are also harmful conditions that have serious consequences for the residents close to these areas. This reality is present at the LF and is perceived by the children.

The water invades suddenly and without mercy, that's when "*our house is going down and he (the father) is fixing the bridge there. The part in front is good, but the back is going down*" (F, 7 years). It's not just the water that invades and removes their homes, but there are also unwanted visitors: "*its filling up our home, I've killed lots of snakes, at night, blind snakes*" (M, 7 years), and creates fear "*the boat is very close, its almost coming into the water in the house*" (F, 8 years). When the rains go away, another situation emerges, but one that offers little relief "*because when the water goes away, the rats remain, and the rats are in the street, and the street is flooded*" (M, 9 years). What is important to the children is the difficult access, mobility and security inside and outside their homes caused by the tempestuous waters, because "*they have to step in the water to get home*" (M, 7 years). Tuan (2005) argues that humans do not accept living in a permanent state of anxiety, and need to maintain a sense of control, regardless of how illusory it may be, for this reason, some children say with resignation: "*I prefer the dry lake*" (F, 10 years).

It was observed in this group that the limiting factors and lack of control over the environment created permanent situations of stress and for this reason statements like "*I don't like the water. There may be snakes in the water, alligators, those fish, piranha, so it's risky*" (F, 12 years). For Günther and Fragelli (2011), environmental stress refers to a condition of the objective world that interferes in the different spheres of individuals. The high water or the uncontrollable flooding comes to be a stressful element seen as inevitable by the children: "*My home is flooding every year it happens*" (M, 10 years).

The children in this category feel constrained by the restricted physical space and threats caused by the floods in the place where they live. The flooded environments project, in subjects that live there, latent psychosocial states of stress that affect their subjective and objective conditions. These statements indicate that the children perceive the water and their living space as something negative, given that it causes a disequilibrium in the harmony of their daily life.

Place of Recreation

The perceptions of the *Lagoa da Francesa* as a *place of recreation* were presented by 14.2 per cent of the children. These expressions highlight the entertainment and play that the space is propitious to. Recreation involves spontaneous, pleasurable and creative activities that the subjects conduct in their free time (CAVALLARI; ZACHARIAS, 2007), even in improper situations.

Water for residents of the Amazon, in particular, provides a stage of joy and cultural identity. Canoeing, swimming, diving, or playing with boats are activities that occur in the lake, and for this reason, “*I see lots of children. They have their little boat for them to play in that water there, sometimes the boat sinks, they sink it playing in that water, they swim with the boat there*” (F, 10 years). It was found that the lake and children complement each other and have firm ties that makes it difficult to separate the child as a being in and out of the lake given that “*she’s in the water, she’s swimming she’s on the float, she’s sleeping, this one is holding one to the float, and its raining*” (F, 7 years). Moreover, children play and learn with each other, even in moments or in places that are not propitious.

Each place establishes a meaning of social use and inherent subjectivities. To use the water as a place for recreation establishes significant contours to kinship ties and to the cultural identity of the region, which becomes blind to the conditions of environmental quality. “*There is this curumim [indigenous child], there’s me, there’s Vinícius, there are my cousins there in the interior, we are swimming there in Francesa*” (M, 7 years), this is an environmental perception that is ripe with possibilities for play and investing affection, even in a polluted environment.

What is important is the water, whose *affordances* (GIBSON, 1986) allow doing everything: “*They fish, jump in the water and flying kites*” (F, 7 years) because “*this water from the lake is good for the children to play*” (M, 13 years). The play in the water thus reflects a world of fantasies and the children dive into it, attracted by the beauty, by the mechanisms inherent to its physical properties (PERES, 2013) and the unusual (ALTMAN, 2010).

For Brougerè (2001), playing is an activity dotted with social meaning that requires learning or adaptations. In this way, culture has an indispensable role in this learning, because in sociocultural relations interactions are established among individuals which can lead to new learning, new modes of being, thinking, feeling and playing. In the case of the Amazon, the water of a lake or river is the inevitable stage of great games, where, since they are very young, children develop as a part of these hydric spaces that become an extension of their bodies.

Given this scenario, the dynamic relationship with water creates a sense of belonging and attachment to the place, while group activities are also favoured by the region.

Children develop their imagination through play as well as their capacity to make friends, socialize, obey rules, accept the other, be a friend: “*Sometimes, I call some boys to go there to play with me, I don’t like to go alone*” (M, 7 years). Through recreational activities, children manifest their emotions, establish their social ties, discover their ability to choose, decide and participate in distinct moments (ALTMAN, 2010).

In this perception, children take advantage of the physical space and thus constitute themselves as children and are not concerned with the problems of the place. What is important is the positive valence of the region. The vulnerability is inevitably gradually installed in such a way as to naturalize the conditions by which these children are led to experience the place and come to affirm “*This is clean water from the lake, there are many children playing there*” (M, 8 years). Because of the obvious sanitary and environmental risks, this situation requires changes from the large society to protect the neighbouring children.

A Place of commerce

For 13.4 per cent of the children the LF is a *place of commerce*. Commerce is an economic activity that consists in buying and selling goods, both products and professional services. There are countless commercial establishments in the region, which is a stage of productivity for the residents. The rural population brings goods to sell in the city (flour, fish, fruit, etc.) and people in the city rent spaces to bars, markets and other shops because there is a constant flow of people in the city. Children acknowledge the existing commerce at the margins of the LF, as “*those little houses closed to the stairway, that sell those things*” (F, 12 years). This region is a significant area of commerce in the city and the different commercial establishments is part of the children’s perceptions: “*there is a street market, there is a bar that sells beer, and there is the Casarão, once I went there to buy meat*” (M, 7 years) or “*here is the Casa Góes, here is the Agroverde. I would buy things there at the Casa Góes*” (F, 12 years).

In this type of understanding, the perception refers not only to the place itself, but also to the world of goods that are available to the residents, despite or without regard for the pollution. For Huberman (1979), this aspect encompasses a network based on the act of producing and acquiring goods. In the Amazonia, the river systems give potential to the urban space where activities for selling and buying various products are inserted.

Upon expressing the commercial quality of the region, the children leave the water in the background and focus on the geographic region. They show that there is a spatial dimension characterized by the buying and selling of goods and services. Such situation indicates the economic importance that the place has for those who consume and think about this environment. This urban activity reaffirms the ideas of Gottdiener (1997) and Lefebvre (2001) that the capitalist city created centres of consumption, making places commercial, environments for encounters, through the agglomeration of things. For the children who perceive the prominence of commerce, the Lagoa da Francesa is inserted in the world of consumption, and in the consequences of this type of use, both of the goods and of the space where this occurs.

Place for Living

For 13.4 per cent of the children, the LF is a *place of residence*. For this group, the LF is understood as a territory of residence that determines a specific way of life, where water in the backyard or under the house is part of the urban scenery, precisely because that space of the water belongs to them. The lake is not only a body of water, but also a territory where urban life takes place. In the drawings of these children the lake is part of their affirmation as urban subjects, they appropriate the space to realize various activities that give them a sense of belonging, even in the city, to a special group: “*My father fishes in the lake, The lake is very good for fishing*” (M, 7 years). The dwelling space is where private life takes place, that is, it is the social organization where children feel at home and in safety (FISCHER, 1994; NEVES, 2013).

Cruz (2011) affirms that by inhabiting a space the occupant invests in it intentions, acts and marks that allow subjects to survive the banalities of daily life, giving themselves an identity, creating conditions that can constitute the residence as a refuge or shelter. Dwelling spaces are the centre of human existence, which attributes to them physical, psychological and cultural meanings. They contain the familiar elements of the lived world, and are an expression of sociocultural identity that reflects a social status and belonging (LEMOS, 2010).

To perceive the LF as a residential environment is to be in a place considered one’s own, where significant day-to-day tasks are performed: “*The lagoon is important to me, because we take baths there and wash clothes*” (M, 8 years). The residence is a space of intimacy and of a conjugation of values and factors, transforming the place into a space of their home. Thus, the space is appropriated through daily tasks and is the ground where the house is located.

Constructed spaces generate subjectivities that involve the production of spatial fragments, so that the children-environmental relationships occurs from the internalization of physical aspects of the environment to constitute an organized symbolic system. The children’s attachment to the place is visible: “*I live close to the lake, my cousins are here. I see lots of things there at home*” (M, 7 years). In this expression, the lake is the arrival and departing point where they feel a necessary comfort and security that support emotional and political ties. Considering both its adversities and its positive qualities, the lake forms a network of socialization: “*This is my home, the neighbours’ houses, the Evangelical church, the tree, the gas station and the Lagoa da Francesa*” (M, 13 years). It is a place where they inhabit and live with its entire vicissitudes. This situation encompasses the nuances of an Amazon city.

Final Considerations

By highlighting the environmental perceptions about LF, the children expressed an understanding of “Lagoa da Francesa”, sometimes a water resource, that is, as a lagoon itself, and now being a geographic area circumscribed in the city space. It was found that when the lake was associated to the salient aspect of the use of water, the negative aspects found in the space were evident. The children who present the Lagoa da Francesca fore-

most as a lake perceive it as a *place of pollution and flooding*. To the eyes of these children the environmental problems stand out as well as the predatory way that the people who live or travel through there use it. The children with this type of perception speak of aspects of daily life and their evaluation of this reality is permeated both by accepted suffering and by a desire to transform this environment. There is a river in the backyard or inside the home, but dignified contact with it is denied.

There is no doubt that the precariousness of the environment strongly affects the formation of these children, limiting their basic rights of citizenship by reducing their opportunities and confronting them with risks whose consequences are difficult to measure. It stands out that 40 per cent of the children express these categories of understanding of the world they live in. Various authors speak of the need for attachment to place based on positive experiences in that space, few of which can be expected in the Lagoa da Francesa. These children grow up seeing the waters of the lake as polluted or flooding their homes in such a way that they naturalize this situation; "it was always like that and it cannot be different". Aspects of a generational environmental amnesia are evident here (KAHN *et al.* 2009). These authors affirm that the parameter of normality expected in daily life is shaped in childhood. If for each generation the world experienced in childhood is more degraded, each generation tends to find the level of environmental degradation to be normal. This naturalization is characteristic of the generational environmental amnesia.

This study found that upon perceiving this space as something negative, children may be building less possibilities of affection than being able to change to improve. Without an effective intervention of public and educational administration, we may be witnessing not only environmental depredation but also the social depreciation of the people who are submitted to this space.

Other children show that their understanding of the Lagoa da Francesa transcends the specific aspects of the lake as a water resource and focus on the geographic region, even if this region does not engender a sense of belonging. A group of 32.5 per cent of the children perceive the LF as a *place of transit and commerce*. The physical space is seen to have a collective use, although one with fleeting emotional ties. The region is a place for shopping, the lake comes to be a complement of the commercial scenery. Equally, it is only a route for coming and going, a passage to other spaces. It is a place that links the here and there and vice-versa, a place of movement, of people who pass through. Some studies reveal a sense of indifference towards places seen in this way, and that this emotional distancing can affect possibilities for formation of the people who live there, in such a way that a place that should be theirs, is a place for all, a place of passage for many. Thus, the child may be involved in this network of environmental vulnerability that are difficult to consider one's own.

Finally, this study found a group that perceives the Lagoa da Francesa as a place that can be appropriated - considered one's own - which is experienced with intensity and intimacy. For 27.5 per cent of the children the LF is a *place of recreation and residence*. In this understanding, the children have an emotional bond with the place, because it is there that they live with their parents and play with friends. Life goes on there with events that create an identity with the place and where the water provides them these moments. Based on this involvement the children reveal important aspects in their own

formation. The environment is experienced with intensity, even if the conditions of the physical environment are not healthy, because this is the only option.

There is a notorious absence of public spaces to provide children a better quality of life in the municipality of Parintins. The young residents suffer from a lack of parks with green space and of preserved natural environments that can respond to their yearning for fun and socialization. Without such spaces, degraded natural environments are the only ones available to them.

Playing in water is necessary to experience childhood in the Amazon. However, the state of the urban waters is qualitatively poor, making it directly or indirectly harmful to human life and wellbeing. So dare say that the child is a public not yet valued in leisure policies and city entertainment. Therefore, public policies must be implemented that are aimed at this segment to transform the social and environmental reality in which they live.

Finally, this study, although it is limited in some aspects, allows verifying the children's potential to show adults how the world is poorly organized, so that it is difficult for them to attain their complete capacity for citizenship. The perceptions of some children show that they want to be protagonists in a new form of organizing environments for those who follow them, even with the few resources offered. It is therefore urgent that today's adults support this desire and provide effective opportunities for children.

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Original Article

ENVIRONMENTAL PERCEPTIONS OF CHILDREN WHO LIVE IN DEGRADED SPACES IN THE AMAZON

Abstract: This study problematizes a reality of degradation of waterways that are bordered by or surround urban spaces. *Lagoa da Francesa (LF)* in Parintins / AM is one of those spaces, once preserved and now polluted. On its banks, hundreds of people live and intensely make use of this place. This study investigated the environmental awareness by children living in the vicinity of LF. Qualitative research was developed by drawings and the content presented by children. The participants were 120 girls and boys, between 7 and 13 years old. The categories of perceptions on LF that emerged were: a) Pollution; b) Flood; c) Trade; d) Transit; e) Living; f) Recreation. Such perceptions reflect feelings of attachment or detachment, possibilities or vulnerabilities that children experience from the world they receive from adults.

Keywords: Environmental Perception; Lagoa da Francesa; Children and Environment.

Resumo: Este estudo problematiza uma realidade da degradação dos cursos d'água urbanos. Nesse estudo, a Lagoa da Francesa (LF), em Parintins/AM, é um destaque geográfico e social, tanto pelo seu passado preservado quanto pelo estado poluído em que se apresenta. As crianças vivem esse lugar ou no entretenimento ou nas agruras do cotidiano. Essa pesquisa de abordagem qualitativa, investigou a percepção ambiental de crianças, a partir do uso da representação gráfica (desenho) e de argumentos elucidativos feitos sobre ele. Participaram da pesquisa 120 meninas e meninos, entre 7 e 13 anos de idade. Os resultados evidenciaram cinco categorias de percepção ambiental da LF: a) Poluição; b) Inundação; c) Comércio; d) Trânsito; e) Moradia; e f) Recreação. Tais percepções refletem sentimentos de apego ou distanciamento, de possibilidades ou vulnerabilidades que as crianças vivenciam a partir do mundo que recebem dos adultos.

Palavras-chave: Percepção Ambiental; Lagoa da Francesa; Crianças e Meio ambiente.

Resumen: Este estudio analiza una realidad de la degradación de los cursos de agua urbanos. En este estudio, el Lagoa da Francesa (LF) en Parintins / AM es un punto culminante geográfica y social, tanto por su pasado conservado como el estado contaminado que se presenta. Los niños viven este lugar o en el entretenimiento o en las dificultades cotidianas. Este estudio cualitativo investigó la conciencia ambiental de los niños acerca de la utilización de la representación gráfica (dibujo) y los argumentos que iluminan hecho sobre él. Los participantes fueron 120 niños y niñas entre 7 y 13 años de edad. Los resultados mostraron

cinco categorías de percepción ambiental de LF: a) Contaminación; b) Inundaciones; c) Comercio; d) Tránsito; e) Vivienda; y f) Recreación. Tales percepciones reflejan los sentimientos de apego o desapego, sea de posibilidades o vulnerabilidades que experimentan los niños del mundo que reciben de los adultos.

Palabras clave: Percepción del Medio Ambiente; Lagoa da Francesa; Niños e Medio Ambiente.
