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CHILDREN'S DRAWINGS AS AN EXPERIENCE – SCOPEAND LIMITS OF THEIR REVELATIONS

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ABSTRACT

O Based on a description of the theories and principles of the analysis of children's drawings, we propose an integrative approach that enables their use in research with children. We created a brief timeline of the concepts that involve children's drawings with emphasis on the evolutionary approach as the central axis of theorizations in the field. Approaching children's drawings with Vygotsky's concept of experience allows us to overcome classic dilemmas of the field, namely, the extent to which drawings are the result of imagination or a description of reality or, moreover, manifest personal or cultural content. By presenting and discussing some drawings collected in different studies, we emphasize the importance of children's drawings, from a multimethod approach, in research with children. We argue in favor of expanding the use of drawings in person-environment studies based on a careful perspective that does not culminate in the adaptation of participants and the content of their works to established theories.

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INTRODUCTION

The modernist Mário de Andrade warned us that drawings are not to be hung on the wall; they must be veneered as scriptures that speak tous directly about knowledge and transient meanings(Andrade, 1984). This recommendation served as a basis to ask and answer the questions – why and how do children draw? In the end, do children's drawings reveal the real world in which they live or the world of their imagination? Do children's drawings allow us to access personal affections or values of a given community or culture? The clue that Andrade gives us to the first question is that we do not have to make this choice between characterizing drawings as a portrait or as a daydream, since, in drawings, this distinction has no place. Drawing is closer to prose and poetry, as it gathers fragments and organizes them into a single sense; it feels, it thinks, and it remembers - "it is a delimiter and has no boundaries" (p. 65). Vygotsky who, with his concept of experience, helps us overcome the individual and community /cultural dichotomy, a lively discussion in his work on children's drawings (Vygotsky, 2006/1930) guides the reflection on the second question.

It is from this enlarged vision of drawing as an emerging experience in the interface of the world with fantasy, of the person with the collective, that we will discuss why and how children draw and its theoretical and methodological implications. Although drawing is also used with adults in research and psychological assessments, it is seen as the specific language of children and a universal ability capable of overcoming limitations imposed by the spoken or written word. Through drawings, children manage to "make themselves understood". Adults, on the other hand, can understand the drawings of children or any person who does not speak their language. When the person with whom we are speaking has difficulties in understanding something that seems simple to us, we say jokingly, "do you want me to draw it? In general, drawing, a universal archaic human language, can serve as a starting point for communication and consensus of meanings. Psychologists, researchers, and educators use children's drawings in their investigative, diagnostic, and evaluative procedures. However, we emphasize beforehand that our purpose in this work is not to make a judicious list of these studies, but to discuss theoretical conceptions that guide theirtheorization and implications. First, we highlight the main approaches to the study of children's drawings by gathering consecrated and critical texts on the subject, which should be consulted for greaterdetail (Abraham, 1963; Cox, 2000; Dredyk, 2003; Gardner, 1980; Goodnow, 1977; Greig, 2004;

Méridieu, 2003). For readers to have a panorama that is comprehensive but not overwhelming, we follow the synthesis proposed by Howard Gardner on the subject, in his work dedicated to children's drawings (Gardner, 1980). Before the theory of multiple intelligences gained notoriety, Gardner, who created the theory, had already emphasized the multiplicity of perceptual and cognitive channels involved in drawing and, for this reason, was able to gather and critically articulate the different views on this phenomenon, venturing away from the isolation and dichotomy between the real and imaginary world or between personal and collective. Next, we present a reflection on drawing as a lived experience from the understanding of Vygotsky, incorporating recent contributions. Third, we present, in a very syncretic manner, a table that organizes the main guidelines of the classifications proposed by drawing researchers to establish interfaces without omitting their differences. Subsequently, we present children's drawings gathered during research with children conducted by the authors of this work, which reveal the complexity of drawing. The session is concludes with the idea that concepts such as Deleuze's becoming-child can free us from previous conceptual constraints. From the concatenation of the different aspects of the elucidated theoretical terrain, we propose a more comprehensive discussion about children's drawings, above all the one inspired by recent person-environment studies that use drawing as an investigative or evaluative tool. Finally, we present considerations that can provide valuable insight into the theoretical and applicative discussion of children's drawings, by proposing a less adult-centric approach in investigations in which children who draw can assume a leading role and their drawings are perceived from a broader perspective than the conventional perspective.

Approaches to children's drawings: The first records of human drawing date back thirty thousand years and follow the cultural evolution of our species (Coppens, 1983; Hetzel &Negreiros, 2007; Nougier, 1993). The prehistoric inhabitants of what we now call Serra da Capivara, Piauí, Brazil, painted two human figures on stone that today are known as The Kiss ("O Beijo" in Portuguese) (Guidon, 1992; Lourdeau, 2019) (Figure 1). As the intimate and sincere expression of affection between people, the simple kiss puts us on an advanced level of civilization, as individuals who are capable of appreciating and portraying such a human gesture with delicacy. Nothing could be further than the image of the prehistoric troglodyte man who drags his woman by the hair with one hand and holds a club in the other. The Kiss of Serra da Capivara is almost symmetrical, arms and hands are not needed. A less romantic interpretation, but by no means less humanistic, is that the figure on the right leans to place chewed food into the mouth of a child or elderly person.

Figure 1- The Kiss ("O Beijo").
Serra da Capivara, Piauí, Brazil. Personal archive.

Everything leads us to believe that prehistoric children also drew on temporarysurfacessuch as sand, the body, or other natural materials. As Gardner (1980) points out, the history of studies on children's drawings is recent and records of drawings made by children from prehistory, the classical era, and the Renaissance are practically non-existent. Before the modern era, few people were interested in or

preserved children's drawings. With the development of scientific disciplines, however, drawing became the object of interest of psychologists, educators, artists, psychiatrists, sociologists, and ethnologists who define its functions, qualities, and possible uses.The conservation and appreciation of children's drawings are recent and stem from the modern interest in the child and, consequently, his or her artistic productions. The theorist Gardner (1980) mentions three trends that were responsible for there being little appreciation of children's drawings in the past. The first is the perception of drawings as a simple reflection of the affective state of children and the manifestation of unconscious restlessness. The second trend, of cognitive emphasis, finds in drawing only a compulsive need of the child to show what he or she knows and is generally used by children to assess their intelligence. The third trend, formed by children's drawing enthusiasts, considers children's productions as indices of more general phenomena of life, namely "the expression of our quest to order the complex universe, examples of communication, indications of the type of society in which we live, memories of our vitality and our lost innocence" (Gardner, 1980, p. 25). In addition to pedagogical and scientific interest, other modern phenomena, such as the reduced cost of paper and pencil and social and family mobilization for the education of children, have contributed to the increasing importance assigned to children's drawings.

Scientifically theorized and ignored as a product of artistic value, children's drawings have become a unique opportunity to understand the experience of childhood in its essence and functioning. Gardner (1980) accurately realized that the initial studies of children's drawings, regardless of the theoretical trend adopted, fulfilled a descriptive and comparative orientation resulting from stylistic and iconographic analysis, thus imprinting on its object an evolutionary trend. This evolutionary, scientific, and modern perception of drawing refers to a relationship between the processes of human evolution, artistic production, and psychogenetic development. The first idea accepted without much critical questioning is that universal art evolved from archaic rock drawings to the execution of complex and sophisticated masterpieces, an expression of excellence of civilizational and cultural evolution. Another idea supported by the evolutionary reference is that drawers, in their first sketches, tend to doodle with little control until they manage to master their motor processes and instruments in a more or less conscious way. Thus, looking throughan evolutionary lens, the child, in their graphic development, also starts with uncontrolled scribbles and evolves toward increasingly organized and elaborate drawings. Coinciding with the first ethnological studies of primitive art, this orientation prepares the ground for psychometric tests that continue to rely on an evolutionary framework. Following the description of Gardner (1980), during the first quarter of the twentieth century, the psychometric approach is predominant and guides the study of drawing as an instrument for assessing psychological level (or IQ). Moreover, in 1926, Goodenough formulates the personality test, in which the elements in drawings are scored quantitatively. This approach, also in keeping with the evolutionary lens, starts from the principle that the evolution of drawing accompanies the cognitive development of the child, who identifies an increasing number of graphic details with a greater capacity for conceptualization and representation. As Gardner (1980) points out, beginning inthe years following the Second World War, a projective approach of clinical and psychoanalytic inspiration is developed, focusing on the revelation of psychological conflicts and personality traits in children's drawings. Among its main representatives, we can mention Machover and his personality test, in which the iconographic and morphological aspects are highlighted, in addition to the symbolism of the different parts of the body and details of the garments. The projective approach updates the evolutionary perspective that understands the child as being in the process of development but broadens the understanding of this phenomenon that is susceptible to failures, interruptions, and deviations, resulting from personal experiences and the groups the child participates. From the study of individual cases, the projective tendency reaches the analysis of groups, which advances toward a broader understanding of children's drawings in relation to their culture of belonging.

Together with the psychometric and projective approaches mentioned above, Gardner (1980) differentiates a third cultural approach that, unlike the others, does not always consider appropriate the approach between primitive art and children's art. According to the cultural approach, the child preferentially clings to objects such as they appear in concrete life, practicing an unconventional symbolism. The child's graphic production, unlike that of the adult, is not intended to be understood by others and, for this reason, is more personal in its content. This approach favors stylistic and technical iconographic analysis through comparative studies between groups and cultures (Bossche, 2006). Although, as Gardner argues, we cannot affirm that there is a conceptual unanimity in this vast field, we can also identify the evolutionary reference, despite revealing a more humanistic than progressive image. In this perspective, primitive, naïve, children's art refers us to what is genuine in the human being and not to the rudimentary stages of our evolution. Naïve or primitive art is generally characterized as self-taught, thus ignoring or denying the dictates of the art academy. Its figuration is two-dimensional and does not respect the rules of perspective. In summary, naïve art, like that of children, is spontaneous, without compromising the analog representation of the world in its vivid color (Santos & Molinari, 2016) (Figure 2).

Figure 2 - TrainPassing ("Trem Passando"). Aparecida Azedo (). Source: International Museum of Naïve Art of Brazil.

In turn, modern art also brings aspects that help us understand children's drawing. Leaving aside the traditions of the past, it is a new art in which the law is replaced by absolute freedom, thus introducing a tendency of autonomy in art in relation to the formal and thematic principles of the traditional academy. It moves away from the portrait and is carried away by its artistic appeal; it is futuristic (Hoffmann, 2017). Modern art has its roots in the foreign avant-garde and attempts to update the Brazilian artistic panorama that reinvents itself in the face of anthropophagic provocation adopting, above all, its perspective of primitivism. Primitivism in the modern and its dialectic between civilization and barbarism were imported from Europe; in Brazil, however, primitivism did not find another exotic alternative but rather the native primitive countryman, and the vanguard of Latin America as a whole turned to its pre-colonial art, building and inaugurating the modern place from a disenchantment of Western civilization (Lima, 2016).

In the words of the author,

> primitivism consisted in a search for elements originating from art, in what would often be of the order of the unconscious: in the feelings and discharge of "raw" emotions, in the formal simplicity – source, for the Cubists, for example, of the possibility of a pure plastic expression, found by them in African art (p. 299).

As we see in Tarsila do Amaral'sAbaporu (man who eats man, in Tupi) (Figure 3), modernism brings in itself an aesthetic project and

an ideological project as its two facets (Nascimento, 2015, p. 383). The female character sitting on grassy land, almost without touching the ground, with a giant hand and foot, willing to feel the elementary world of simple landscape and lush colors. The small thinking head resting on the other small distant arm almost touches the sun, which, at the top and in the center, imposes its light. The cactus without thorns and flowers is also a character under the sun, undiscouraged by its strength.

Figure 3. Abaporu. Tarsila do Amaral, 1918. Source: MALBA.

As we have seen, the idea of modernism deals with an art conscious of its transformative and subversive role in the face of Western bourgeois culture (Argan, 1987), while naïve art is, as its name implies, naïve, puerile, and spontaneous. However, primitivism seems to be the aspect that unites them, and that interests us when we deal with children's drawings. It brings in itself the possibility of expression and protest, more or less conscious, that is able to break away from the established through its graphic reconstruction, of putting emotions, knowledge, and experiences into strokes and colors.

Drawing as a lived experience: When discussing the psychological factors of art, Vygotsky sees art as both knowledge and catharsis (Vygotsky, 1999/1925). In art/drawing as knowledge, there is the external form (drawing), the internal form (landscape), and the idea (happy place), while the catharsis of emotion involves feeling and imagination. According to the socio-historical approach, the graphic creation of children is a process of re-signification of the world that covers fantasy and reality, body and thought, affection and cognition, personal and collective (Leite, 1998, Vygotsky, 2006/1930). For Vygotsky, drawing is the production of meanings and senses - "an approach with this purpose departs from the idea of mental representations and elects the complex semiotic functioning configured by the uses of languages, implicated in the heterogeneity and interdependence of organism and environment". (2006/1930, p. 348). Thus, by addressing the difference between the child's imagination and that of the adult, the theoretical departs from the almost consensual conception, according to which the child's imagination is richer, and that maturation causes the impoverishment of the imaginative capacity. According to Vygotsky, in contrast, this conception cannot be scientifically accepted since the experience of the child is less than that of the adult and the interests of the child are simpler, elementary, and limited.

Evolutionary phase	Period of psychogenetic development (Piaget, 1970)	Evolution of drawing
From fortuitous realism to figuration	Preoperational – absence of conceptual schemes to represent reality egocentric positioning	The drawing bears little resemblance to the real object; it is usually named with a fortuitous comment, as part of the communication game in a culture that asks for answers and names for things. The figuration of space ignores the projective and Euclidean relationships, and there is no constancy of quantities or any attempt to represent distances or depth. The drawn elements share the same sheet of paper without the intention of forming an elaborate scenario with these elements. Stimulation factors: motor and expressive experience in the experimentation of materials and supports
Representation and intellectual realism	Concrete operational - ability to logically integrate different points of view.	Elementary topological relations begin to be organized, neighborhood relations become more or less respected, and forms are more or less differentiated. Even with the understanding of the existence of a relationship between the elements, this relationship is still inadequately represented. Skills are acquired progressively by mastering the properties and techniques of the graphic mode of expression. Stimulation factors: the fabulation that gives free rein to imagistic narratives and the increasing aptitude in executing configurations that begin to look like objects. At this moment, the child finds out that he or she can do things with the pencil on paper. We observe the emergence of the first oval shape called person.
Visual realism	Formal operational single point of view, syncretic conjunction, search of depth, and effective realization of perspective	Greater concern with respect for distances, proportions, and unity from the point of view. Projective relations seek to determine and preserve the real positions of lines in relation to each other. The image of an object or situation, as these are seen in reality or in a photograph, is evidenced. Stimulation factors: the child is not interested in recording everything he or she knows about an object or situation and is more concerned with showing that he or she knows how to draw the real similar to how it is presented.

Taking the evolutionary trend in another direction, the socio-historical conception highlights the following:

> "…the centrality of language and the use of instruments as transformers of the history of the human species demarcates the phylogenetic and constitutive evolution of ontogenesis (history of the individual organism of the species and the singular sequence of processes and experiences lived by each individual)". (Araújo & Lacerda, 2010, p. 697).

Thus, as a recreation of experience, drawing is able to treat perception as a problem, remove the object from its usual context, and transform it into a representation or recreation of reality, creating an "object loaded with memory" (Leite, 1998, p.137). We can therefore affirm that drawing is experiencing, recreating experience is being active in a current experience, and drawingsare as Mário de Andrade points out, delimiters without limits (Andrade, 1984). *The stages of the evolution of children's drawings:* This section summarizes the stages of children's drawing and presents drawings collected by the author's research, duly authorized by the respective participants according to standards established by CONEP (CEP 2658880, 3057395, 469854). In the very idea of graphic development lies the notion of stages or cycles experienced by each normal child, progressing at their own pace. It must be clarified that we do not seek to establish or refer to an analog correspondence between age, abilities, and stages of children's drawing. Our intention is to discuss a certain existing consensus in the area and contribute to its advancement and improvement. A model of child development stages was used to guide the analysis and

interpretation of children's drawings. Piaget's psychogenetic theory (Piaget, 1970; Piaget & Inhelder, 1967), which establishes the preoperational stage, the concrete operational stage, and the formal operation stage, serves as a reference for almost all researchers who use drawing as an evaluative, diagnostic, methodological, and comparative tool. In this essay, we do not intend to analyze the Piagetian perspective, but only, as explained above, without observing strict age distribution criteria, to highlight its hegemonic position as a guide for the studies of drawing as highlighted by Gardner (1980). Moreover, we do not follow the fixed delimitation of stages by age since we consider it a factor of significant and immeasurable cultural diversity. The same reasoning will be used in relation to the gender of the drawers. In general, in the evolutionary approach prevalent in the study of children's drawings, children initially express their own particular point of view in drawing to then simultaneously represent several points of view and eventually adopt a common point of view that corresponds to reality (Table 1). The young drawer begins by scribbling the shapes by themselves, without representative intention, even when this is already possible in other areas of language such as speech. From a simple central circle, entry into the figurative stage begins; the child realizes the result of his or her action and the possibility of manipulating the forms for this purpose. According to Gardner (1980), for now children do not feel the need for a "dotted isomorphism" between the drawing and the object to which it refers, and are satisfied with a global correspondence. From the overall image of the human figure arise more detailed variations with fingers and ornaments, as well as a better definition of the shape of the body, eyes, nose, and mouth. The features become less symbolic and closer to the visual real body or, as described by Gardner, "a person ends up

looking like a person"[12]. Little by little, the repertoire of representable things increases and, from the initial oval shape, people, characters, and animals emerge, followed by the development of all the other motifs such as the house, the flower, the sun, and the trees (Figure 4). For the reasons explained above, the exact ages and genders were purposely concealed, and the theme was free.

Figure 4 - Drawings of children between four and eight years of age. a. Fortuitous features and gradual beginning of the dominance of the circular shape; b. Circle better demarcated from the other objects in the scene and surrounded by rays; c. Small singularized circles with facial attributes; d. Entire human being with separation of the head and outline of the limbs; e. Full mastery of the circular shape and of what is internal and external with delimitations; f. Experimentation of shapes and colors in a more controlled way; g. Differentiated animals and diverse use of shapes and colors in a scene that becomes more organized; h. Scene with the human character in the center of the sheet, surrounded by an atmosphere of flowers with human characteristics and the presence of two suns.

It is in the stage of intellectual realism, from the domain of strokes and forms that the first graphic strategies arise, such as aerial views and transparencies – examples of intellectual realism- from the rudimentary human representation to the beginning of visual realism (Figure 5).
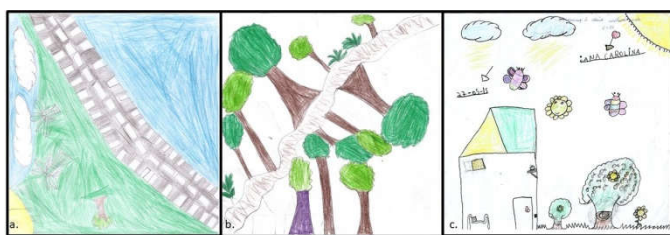

Figure 5 - a. aerial view b. reflection c. transparency

If there is any consensus among scholars of children's drawings, it is that between the ages of five and seven, drawings are very expressive and pleasing to the eye; moreover, this peculiar aesthetic appeal reveals an artistic impulse that, at the start of schooling (increasingly early), is characterized by the flowering of abilities and by an intense and inspired awareness of expressive prodigy (Gardner, 1980). This stage of intellectual realism is also surrounded by a peculiar golden aura that gives it a lot of authenticity. Now, the young drawer has already mastered the forms and vocabulary of graphic schemes and is able to represent reality in a recognizable way. However, the child's imagination still enjoys autonomy in relation to the restrictive world that surrounds it. According to Gardner, "we can affirm that the child is aware of practices, rules, norms, and options, but these do not govern either their thought or their action: they can adopt them or not" (1980, p.168). The most evident factors are the attributes of the drawn objects and environments, that is, the important thing for the child is

to record what he or she feels and knows about those elements, even if the resulting image does not correspond to the real image of the object or situation. It is only in mid-childhood, without overlooking the enormous cultural variations of age groups, that the child begins to guide his or her graphic expression through fidelity to the real. The last major stage, called visual realism (Figure 6), starts between eight and nine years of age, and denotes a growing concern with the visual reliability of the drawn elements. In the drawn nature landscape, there is an attempt to portray the distances in perspective and the shape that snakes take when they curl up in the trees.

Figure 6 - Visual realism

In Western school culture, we observe the abandonment of improvised solutions as a function of graphic representation procedures in the direction of visual realism. Based on the commitment with accuracy and the real, the child has the following tasks for his or her artistic development: the use of perspective, luminosity, spatial relationships, and shadows. However, for the child to master these graphic skills, the applied study of the stroke is required for many years, except in the case of spontaneous or self-taught talents. If the school or other educational context does not consistently and continuously enable the study and practice of drawing (and the visual arts in general), this mode of expression tends to be abandoned. Although Piaget (1970) considers that the child enters the formal operative period around eleven years, this stage can correspond with visual realism. Formal operation is precisely characterized by its alignment with the adult's thinking and mastery of the logical schemes that organize it. This transition from intellectual to visual realism seems to indicate the border that differentiates children's exuberant world from the adult world conformed to conventional norms; the works become more predictable, indicating that the child's program began to resemble that of culture and the environment (Piaget, 1967).

Vygotsky (2003/1930) also highlights a transition stage, treatedas a "mountainoushaven" through which the imagination passes. In this stage of coincidence between imaginative and intellectual development, the imagination goes through a profound change from subjective to objective. The creative torrent that was previously manifested by various forms and languages is now channeled into a less personal and more rational course, according to the experiences provided by the child's socio-historical context. At eight or nine years of age, the child who has the appropriate opportunities is already able to draw with precision, attention to detail, and with full mastery of geometric shapes, with or without the use of instruments such as a ruler, protractor, and compass. In contrast, the child's work seems less expressive or alive, as if they had faded into their colors and the intensity of their strokes, which become linear and precise. We find in

Gardner, as in other scholars of children's drawings, the assumption according to which improving technical skills comes at the cost of inventiveness. Once literate, the child no longer invents images to explain things, he or she prefers to adopt the written language that uses words to represent each thing and can be understood immediately by any reader, at least in what we usually call the literate Western world. From this perspective, the drawing that precedes literacy is replaced as a mean of expression by writing. The discovery of a more precise language and the often frustrated self-demand of the execution of a photographic realism seems to diminish the creative originality of the drawing. Based on the final goal of mastering and adopting perspective, we can synthesize graphic development from an evolutionary orientation as follows: single point of view, syncretic conjunction, search for depth, and effective realization of the conventional perspective. Each step is a synthesis of previous acquisitions, according to the Piagetian adaption model of assimilation and accommodation (Piaget, Piaget's Theory, 1970; Piaget &Inhelder, 1967). According to the same trend, intercultural studies have revealed a path of graphic development consisting of universal stages summarized as follows: from a basic motor movement, the child learns to master strokes and forms and then learns to draw initial figure representations that will serve as a basis for scenes in intellectual realism until reaching, or not, visual realism. The cultural approach is distinguished with emphasis on the socio-cultural environment of the child. According to Bossche (2006), children's drawings allow us to identify the personal and collective styles of the child and discover psychological, cultural, and pedagogical meanings. From the study of iconographic complexity and the technique of children's art, we can establish correspondences and differences between drawings of different children from all parts of the world, as well as discern common (universal) traits, individual psychology traits (idiosyncrasy), and cultural traits (common to the group). In this work, we will not deal with the issue of animism since this important aspect of children's drawings has been addressed in more detail in a previous study (Profice, 2018).

Children's drawings in person-environment studies: After this brief description of the classical and critical approaches to children's drawings, we will explore its main attributes with regard to its use for investigative purposes, especially in interdisciplinary research and oriented by the person-environment. The present work does not address the clinical and pedagogical uses of drawing or drawing at specific ages since the cultural and personal variations are immeasurable for our purpose. As mentioned previously, research on how children see, feel, or think about the world or a certain aspect of it requires the researcher to understand context and formulate strategies to approach the meaning that the participants give to the topic under investigation (Profice&Pinheiro, 2009). For scholars of environmental cognition (Milgram, 1973), projective instruments, such as drawing, function more as stimulants than as sources of evidence because they generate many data susceptible to different interpretations. Drawing is an ideal instrument to access the child's experiences that add personal and collective, affective and cognitive and communicative and artistic factors. Additionally, a multimethod approach is inevitably required to understand the complexity of the experience and conduct qualitatively significant research (Clark, 2001, Günther, Elali, &Pinheiro, 2008). Furthermore, the supralinguistic character of children's drawings facilitates the comparison of results between different studies that have used this same instrument, thus generating quantitative and qualitative data for a more comprehensive analysis (Barraza, Ahumada, & Ceja-Adame, 2006; Köse, 2008; Profice, 2018).

Although person-environment studies incorporate the established theories on children's drawings, they expand interpretations and address facilities and limitations. According to Barraza, Ahumada, & Ceja-Adame (2006), drawings enable a diagnosis of the participant's knowledge on a given theme or phenomenon because their production stimulates the recreation of concepts and objects. However, if on one hand drawing can facilitate the expression of thoughts, feelings, interests, and knowledge, on the other hand, it can be a limiting technique for some children who feel unable to draw or inhibited by

other participants (Martinho&Talamoni, 2007). Thus, while demonstrating the knowledge that the child has about a certain topic, drawing also omits what the child does not consider he or she is capable of representing (Cronin-Jones, 2005). Agostini and Nunes (2019) emphasize the participation of children as protagonists in their interactions with researchers who make them their object of academic interest. It is a matter of researching with children and allowing their vision to unravel our object-subject of research, which is the children themselves. There is a possible field of negotiation that seeks to break free from the adult-centered modus operandi instilled in us. A drawing can only be read through dialog with the child who drew it; that is, exploration through dialog between an adult and a child about a given topic. Only the child is able to retrieve (or even transform) his or her intention when drawing objects, people, and environments, and any interpretation that neglects the author will probably lead to error and speculation, at best. Moreover, the graphic product accompanied by the discussion of its elements with the drawers enables openness to dialog and the renewal of meanings (Lodge, 2007). A phenomenological approach, with emphasis on the multimodality of language, allows us to understand the visual arts produced by children and young people as an expression of their experience and the union of their personal impressions with the shared and collectively experienced world. People learn and express themselves through different languages, verbal and otherwise (Alerby&Bergmark, 2012). The authors highlight that the key factors for the analysis of data produced from a phenomenological life-world approach are openness and humility toward the studied phenomena and the participants of the investigation. Children's drawings have the power to bring lived experiences to a sheet of paper, as an account and as an understanding. The graphic production of children provides insights for researchers, gives structure and focus to the discussion, and identifies and synthesizes the potential knowledge of a group (Yuen, 2004). Even while considering the inventive freedom of the child, researchers should observe the influence of social desirability. When a child is asked to draw, the desire to meet the expectation of the person who made the request comes into play. The child may try to produce what the researcher hopes to find instead of producing his or her thoughts on the topic in question.

Figure 7. TabaJairi - Tupinambá people of Olivença, Bahia.

At this point, the need for complementation by other sources cannot be circumvented in any way; the child's voice complements his or her strokes. Last but not least, even if all formal ethical procedures are adopted and those responsible agree to the participation of their children in the research, the one who investigates and uses the child's drawing must always request the child's authorization directly. Transparency in the research process and the acquiescence of children

clear the path for them to be the protagonists of their production rather than mere subjects of research. The following drawings were based on the orientation-theme of nature, its beings, and the environment. Only the cultural context as a reference for the production and the children's statements when describing their drawings will be highlighted. In the following drawing (Figure 7) nature and human elements coexist without demarcated borders, the indigenous school and the beach transit among themselves together with their beings and visitors. The experience of this child expresses a fluidity between nature and school that does not observe Western dichotomous thinking in which humans are separate from the natural world. The story narrated by the drawer explains this fluid transit, as well as the reaction of natural beings when their space is invaded: "on the beach, class is happening at school and everyone went out to swim in the sea, then they came back to take a hot shower, and then went back to the beach and saw a happy shark, then the buggy buried the crabs and the crabs punctured the buggy's tire".
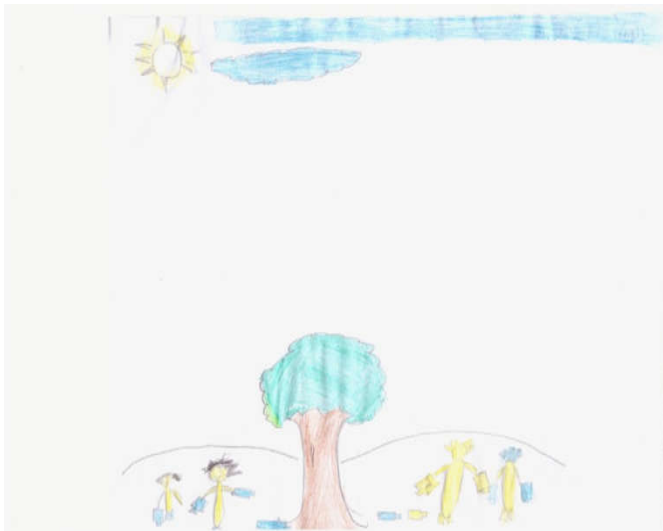

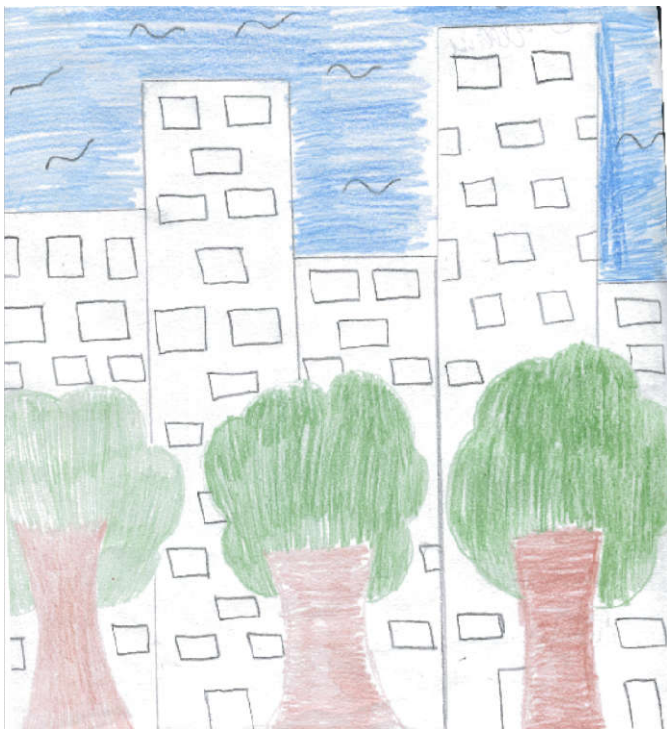**Figure 8. Rural area, Bahia**

Figure 9. Urban neighborhood, New York

The title given to the next drawing (Figure 8) by its author was "Take care of nature". In the scene, human beings work together to remove the unwanted elements from the landscape, in this case, plastic bottles.

When asked about what was happening in the scene, the child replied, "picking up garbage in nature, me, and my friends." The nature experienced here demands care, and people are responsible for removing the garbage they have left in nature. Nature cannot defend itself from plastic alone and people who invade its space must be careful. Below, the nature theme of a child who lives in a large city (Figure 9), with natural spaces circumscribed to the empty, devitalized, and colorless urban landscape. Nature brings color to the drawing and vitalizes it with non-human beings. The comment brings a slightly optimistic tone to the future: "Nature is something wonderful, that everyone needs to take care of. We need to experience it before it ends." It also portrays some awareness of the serious problems arising from the separation of nature and people, for natural beings and humans alike, and reflects the evidence that we are dependent not only on its ecosystem services but on its full integrity for our total well-being. In the landscape below (Figure 10), the child describes his work with the statement, "When I went to my father's farm". The animals depicted, a cow and pig, are domestic, the fish are bred in a small dam, and the tree is loaded with fruits. It is a nature of everyday presence, experienced according to its servitude to the people who live from the land and its products.

Final considerations: Many reasons lead us to question the relevance of setting universal age milestones for the transition from one stage to another in graphic development. First, schooling and literacy occur increasingly early and involve huge socio-cultural and pedagogical variations. Regardless of schooling, cultures and expectations regarding children prevent us from determining age milestones. At a theoretical level, it is more appropriate to use an approach based on the notion of becoming-child (Deleuze, 1997; Kastrup, 1999), which allows us to think of the child from their perspective, in whatever period they are in, without establishing fixed and predictable stages of development and, above all, without adopting the child's success as a future adult as reference (Schèrer, 2002).

Figure 10. Rural area, Bahia

From the viewpoint of the concept of experiences (Vygotsky, 2010) and becoming-child (Deleuze, 1997; Kastrup, 1999), it is possible to affirm that in children's drawings, the real and imaginary planes are overlapped and reconfigured, personal sense and cultural meaning are articulated, and knowledge and affection are not distinguished in their expression. When drawing, the child is free within their limits that expand with their imagination, desire, and self-affirmation. Unfortunately, in the conventional schooling model, as children

becomeliterate they lose contact and time to engage in artistic activities. When art does occur at school, drawing is confined to a white rectangular sheet of paper and colored pencils, and even geometric drawing is seen only as a complement to mathematics. Fine arts as a discipline taught by trained professionals is an exception found in more privileged schools, as in the case of music and the performing and literary arts. Proposals based on art education are marginal and alternative since, in an immediate and mistaken view, they do not contribute to the school performance of students. The therapeutic use of art, especially through approaches supported by art therapy, seems to stimulate and enable drawing as a language for children. Finally, extra-curricular cognitive opportunities provided by digital media and networks provide a new and still little-known dynamic of access, use, and manipulation of images, which reinforces the need to rethink the concepts of ages and their relationships with skills in a contextualized way. Although the manner in which childhood is perceived is highlighted in most theorizations of drawing, its replacement by adult perception is seen as both maturing and as a fatality. Studies of children's drawings agree that children initially perceive and express themselves in the real from their intuition and creativity, thus denoting global apprehension and massive interaction with elements of the environment. Their perception and expression are only progressively directed towards a controlled and controlling analytical apprehension concerned with anticipating the context that will receive the child. The acquisition of knowledge and the desire for accuracy become important in our production-and performance-oriented society.

The pursuit that belonged to the child is replaced by another pursuit, that of conforming to the available rules of visual representation and of knowing how to execute them. However, we believe that there is no irreversible replacement of one way of representing the world graphically for another - the child, and even the adult, is able to use strategies from previous stages that have already been overcome. Thus, fortuitous realism persists as intuition and as a graphic resource. It can be temporarily abandoned when the domain of attributes of objects and environments is in the foreground, but it can always be summoned again as a potential for intuitive and aesthetic creation. Technical improvement should not necessarily mean a loss of inventiveness, which is a questionable socio-cultural condition assimilated and disseminated by development theories. Graphic features of intellectual realism considered rudimentary, such as transparencies or reflections, can be seen not as failed attempts of visual realism, but rather as expressive forms that are potentially preserved. In fine arts, there is no shortage of the use of so-called children's techniques by popular artists such as Picasso, Klee, Tarsilia do Amaral, among many others that prove the compatibility between competence and inventiveness. Drawing is a potential human skill that is more or less used according to cultural requirements and opportunities. When interacting with a child's drawing, we must recover its artistic dimension and understand what it reveals about its author and its period. Drawing as an experience has the same materiality of the written word developed from it. Moreover, it exists while it is deciphered by its creator and by its observer and it is always an open fact. As stated by Andrade (1984), "it is a kind of proverb (...), it expresses an experience lived and transformed into an eminently intellectual definition" (p. 69-70). Just as the wisdom of the proverb is transitory, so is the wisdom of drawing, "it is the verification of a moment" (p.70). Children's drawings provide a view of different planes and perspectives simultaneously; this is its expressive richness and not its technical limitation. Moreover, drawing is a transient language characterized by its potential for reformulation and, in this sense, differs from photography in that it does not materialize a moment but only leaves a trace of its experience.

In this mode of appropriation found in drawing, lies basic wisdom and not ignorance of principle. We must be attentive to this vision regarding drawing and the cognitive processes of categorization, which are typical of Western rationality that will not always, in our view, find the same constants in varied cultures, despite the effort to identify the universal. Culture is pervasive and the socio-historical context updates our perceptions in real and current time. When drawing is removed from the universal categories, we are left with the experience, the real in occurrence, updating or not forms and colors of what came to mind and where the border between real and imagined expands its domain.

For this reason, investigations that use design as a methodological tool should be guided by less rigid and more holistic and ecological development frameworks. This field opening can be constructed from a new look at the studies and theories that are available, starting from the specificity in perceiving and knowing of the child, considering the child as a potentiality always present in all stages of a person's life. The history of studies on drawing includes the concept of becoming - child that, by the influence of classificatory theorizations, was made rigid by the ideal of analogous representations of objects, people, and real environments. The boundary between child and adult vision is mobile; it is culturally and circumstantially demarcated and it is the same boundary that separates imagination from reality. Our research and assessments only become beneficial if we allow our adult-centric view to be imbued with the multiplicity of perspectives that children are able to express in their drawings. In line with the modernist approach of Andrade (1984), Gardner (1980)[2] evokes the Greek myth of the bed of Procrustes to caricature conceptual limitations and warn of the risks of adopting a rigid stance towards children's drawings. According to the myth, Procrustes had an iron bed he would offer his guests who should, in turn, fit perfectly in it. If they were larger, their limbs were amputated and, if they were smaller, they were stretched until they reached the exact size of the bed. With this myth, Gardner warns us that we often seek to adapt a given phenomenon to a certain theoretical perspective by removing or adding elements to make it fit a given conceptualization. Therefore, we must neither amputate nor stretch our children for them to fit into a cold and rigid bed. According to Mário de Andrade, drawing is a living and ongoing source of information, which makes it a product/producer of knowledge and bearer of transient meaningsthat demands perceptive sensitivity on the part of those who observe it. These transitory meaningsare the affections experienced by people and collectives and the cultural values that give them meaning. Drawing is the revelation of a child'sexperiences in becoming.

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