

STRATEGIES FOR CREATING VISUAL SYMBOLS IN PRESCHOOL CHILDREN

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Preschool children do not draw what they see but rather what they know about the object they wish to draw. These drawings are referred to as symbols. This study investigated how these symbols are created. For the purposes of our research, we grouped the motifs that children transform into symbols during drawing into three categories. Visual examples of the selected motifs were prepared and artistic activities were carried out on their basis. The study found that it was difficult to influence the drawing of spontaneously developed symbols, e.g. a house, a person, an animal or a plant, with direct visual impressions. The similar is true for symbols that emerge later in a child's development. The study further found that it was possible to influence the drawing of those motifs that children do not develop on their own but only draw when encouraged by adults. Children introduce their own individual visual impressions into these symbols, which vary from one child to another. We developed new terminology for the different subtypes of symbols based on the results of our research.

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STRATEGIJE KREIRANJA LIKOVNIH SIMBOLOV PRI PREDŠOLSKIH OTROCIH

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Otroci v predšolskem obdobju ne rišejo tega, kar vidijo, ampak to, kar o predmetu, ki ga želijo narisati, vedo. Tem risbam pravimo simboli. V raziskavi preučujemo, kako ti simboli nastajajo. Za potrebe raziskave smo motive, ki jih otroci med risanjem pretvarjajo v simbole, razvrstili v tri kategorije. Pripravili smo vizualne primere izbranih motivov in na podlagi njih izvedli likovne dejavnosti. Ugotovili smo, da je na risanje spontano razvitih simbolov, npr. hiša, človek, žival ali rastlina, težko vplivati z neposrednimi vidnimi vtisi. Podobno je s simboli, ki nastajajo kasneje v otrokovem razvoju. Nadalje smo ugotovili, da je možno vplivati na risanje tistih motivov, ki jih otrok ne razvije sam od sebe, ampak jih riše šele na spodbudo odraslih. Otroci v ta simbol vnašajo vidne vtise, ki so pri posameznikih različni. Na podlagi rezultatov raziskave smo razvili nova poimenovanja različnih podvrst simbolov.



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1 Introduction

Artistic expression of preschool children is specific and follows a certain model, with the stages of development following the same sequence (Gerlovič and Gregorač, 1976; Lowenfeld and Brittain, 1987; Arnheim, 2009; Barnes, 2009; Zupančič, 2001, 2017, Marjanovič Umek and Zupančič, 2020). The fact that all children, regardless of their social, educational, cultural or other environment, follow the same path in the development of artistic expression is due to the genetic determination of the development of artistic expression. Children typically begin to regularly make drawings around 3 years of age, before they learn formal written alphabets but after they have a rudimentary verbal command of language. During this time, the majority of children's drawings consist of exaggerated features, nonsensical shapes or objects, and other visual characteristics that appear to differ greatly from real objects in the world (Coates & Coates, 2006). At around the age of 3 years, and up to the age of 4, the child goes through a period of graphic and cognitive development characterised by the attention to form and the emergence of an initial mode of representation (Machon, 2023).

Artistic expression in the preschool period serves as a tool for the child's cognitive development or what is commonly referred to as a cognitive necessity (Muhovič, 1990). This holds true until the age of six or seven, after which the developmental role of artistic expression slowly fades. One of the most evident developmental characteristics of this period is artistic expression through symbols (Lowenfeld and Brittain, 1987; Arnheim, 2009; Barnes, 2009; Zupančič, 2001, 2017, Marjanovič Umek and Zupančič, 2020). Children up to the age of seven do not draw what they see but rather what they know about the subject they are depicting (Arnheim, 2009, et al.). "People who are not experts in art often see artistic development in rather simplistic and unilinear ways-as an ability to progress from pictorial production that "looks like nothing" to creation of images that "looks like something" (Kindler, 2004). The symbolic role of the drawing is so powerful that the entire period of early artistic development between the ages of four and seven is named after it. Horvat and Magajna (1987), Hurlock (1973), and Toličič (1979), Marjanovič Umek and Zupančič (2020) refer to this period of artistic expression as the symbolic stage, Lowenfeld and Brittain (1987) speak of the pre-schematic stage, Karlavaris (1988) of the stages of schema or developed schema, Porto (2023) speaks of the capacity to take a meta-presentational stance, and so forth.

It is therefore widely accepted in preschool art education that instructional stimuli need to foster the development of these symbols. Development progresses from simple symbols, which appear spontaneously in the child's drawings, to increasingly complex ones. The purpose of instructional stimuli is to facilitate the child's transition from the symbolic phase of artistic expression to depictions on the basis of visual impressions. Visual information gradually begins to enter the thought process of drawing.

Most art education manuals (Belamarić, 1987; Zupančič, 2001; Barnes, 2009), art curricula (Wood, 2014; Bahovec, 2019) and lesson plans (Kocjančič, 2011) take this characteristic of artistic development into account and accordingly develop educational strategies. It is therefore considered that drawing from observation is more suitable for children after the age of eight, when they become capable of perceiving and artistically processing what they see. Furthermore, art education recognises the importance of developing children's visual symbols and helps them to do so. Drawing based on direct observation is therefore also present in the preschool period, albeit to a lesser extent.

2 Purpose of the study and method

In order for art education to foster children's artistic development, it must understand it in detail. This study therefore aims to deepen our understanding of the creation of visual symbols.

We have chosen three types of symbols (and therefore motifs) that appear in children's drawings. The first motifs are the human figure and the house. These are the two most common motifs that appear in children's artwork (Belamarić, 1987; Arnheim, 2009; Barnes, 2009). These two motifs appear spontaneously in a child's drawing. In the case of drawing the human figure, this is understandable, as children's interest in themselves and the development of self-awareness are fundamental developmental characteristics. The house as a place where the child feels safe is the second spontaneously developed motif. Other motifs falling into this category include animal figures, plants, flowers, trees, cars, the sun, and clouds. For the purposes of our study, we refer to these motifs as first-level symbols.

The second motif in the study is the motif of the sailing boat. This is a specific type of vessel that appears later in the artistic expression of preschool children. It also mainly develops spontaneously and is largely present in drawings during the older preschool period, i.e. at the age of 5 and 6. Symbols that appear later in the child's drawing, but still spontaneously, are referred to as second-level symbols.

The third motif in our study are streetlights. This motif is characterised by the fact that although children aged 5–6 already know and understand this motif, it does not appear spontaneously in their artistic expression. There are two reasons for this. Firstly, these motifs are not interesting enough for children to develop an interest in them on their own, and, secondly, adults rarely offer them as motifs for the children's drawings. Such motifs have been termed third-level symbols. This study aimed to explore the differences among these three types of symbols.

2.1 Sample

The study used artwork created by children aged 4 to 6. The artwork was created as a part of a broader research (diploma thesis) on the development of motifs in the artistic expression of preschool children (Krenker, 2023). Artwork from two of the six activities carried out as a part of this research was used. A total of 24 children from the same group from Dravograd Kindergarten participated in the study, i.e. 13 boys and 11 girls. The data were collected in May and June 2023.

2.2 Data collection methods

Children's artwork was not collected under strict test conditions, but in the context of artistic activities that took place in line with conventional lesson plans. Under test conditions, artistic activities are strictly supervised and children are usually only given basic instructions on what to do. In the case of lesson plans, however, the adult integrates all the necessary educational parameters into the activity. The adult provides the appropriate motivation, clearly demonstrates the visual phenomena in question, stimulates the children's ideas and perceptions with questions, encourages artistic expression during practical work, etc. This approach has been chosen intentionally, as it aligns with the purposes of the study. The chosen perspective was also taken into account in the interpretation of the results.

We analysed products that were created during two different activities. In the first activity, children were presented with a reproduction of an artwork (Figure 1).

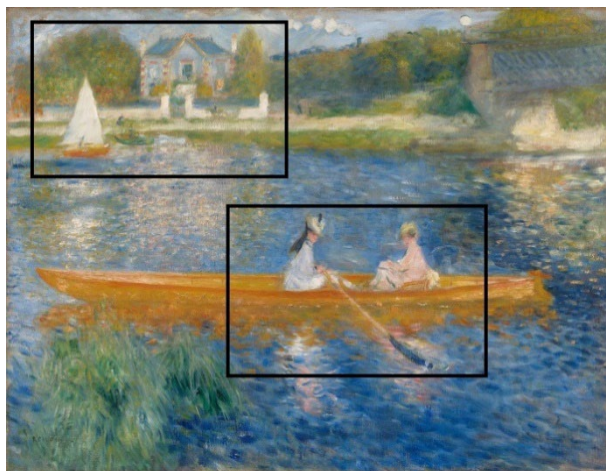


Figure 1: Pierre-Auguste Renoir, La Yole, 1875.

Source: https://en.m.wikipedia.org/wiki/File:Pierre-Auguste_Renoir_-_La_Yole.jpg

All the children were given an A3-sized reproduction. The first group of children copied the reproduction onto a blank sheet of paper using crayons. The second group of children did not work on a blank sheet, but were given an incomplete reproduction as the basis. There were two white rectangles hiding the motifs of the house, the sailing boat, and the people (Figure 1). The children's task was to fill these gaps and draw what was missing. Throughout the drawing process, both groups of children could observe the (whole) reproduction. These two activities contained first- and second-level motifs, i.e. a house, a human figure, and a sailing boat.

In the second activity, the children were introduced to streetlights during introductory motivation and looked at several different examples (Figure 2). They then drew the streetlights in the scratchboard technique. This technique was chosen because it is simple and allows for precise expression using lines. At the same time, we made sure that the children were familiar with the technique and had mastered it before carrying out the research. The streetlight motifs were available to the children for additional viewing and observation throughout the process of creating their artwork.



Figure 2: Photographs of different streetlights

Source: Krenker, 2023. With permission.

2.3 Data processing methods

The study was conducted using the descriptive, non-experimental and comparative methods of pedagogical research. The following qualitative methods were used: analysis of children's artwork, comparison between children's artwork and real visual impressions, grouping and classification of artwork, etc.

2.4 Research questions

Research question 1 (RQ1): We are interested in whether there are differences in the creation of visual symbols of different levels.

Research question 2 (RQ2): In the example of the house and the human figure, we are specifically interested in the relationship between the symbol in the child's drawing and the actual visual impression.

Research question 3 (RQ3): In the example of the sailing boat, we are specifically interested in the relationship between the symbol in the child's drawing and the actual visual impression.

Research question 4 (RQ4): In the example of the streetlight, we are specifically interested in the relationship between the symbol in the child’s drawing and the actual visual impression.

3 Results and interpretation

Using the most common first-level symbol, i.e. the house, the following was established. Regardless of the varied depiction of the house in the artwork (Figure 1), it was always depicted by the children as a classic children’s artistic symbol (Figure 3).

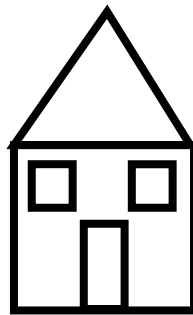


Figure 3: A child’s drawing of the symbol for the motif of a house.

This can be seen in several examples in Figure 4.



Figure 4: Children’s depictions of a house and a sailing boat based on Renoir’s painting.

The examples in Figures 4C, D, E, and G show a typical symbol of a house as depicted by children. The house in Figure 4F can be included in the same group, except that in this case, the child has not yet mastered drawing triangular shapes, so the roof is drawn as a rectangle. The depiction in Figure 4H can also be included in

the same group, except that the use of a light colour makes it less visible. In two cases (Figures 4A and 4B), the child did not depict the motif. A similar situation can be observed in the second data collection method, when the children copied the entire reproduction (Figure 5).

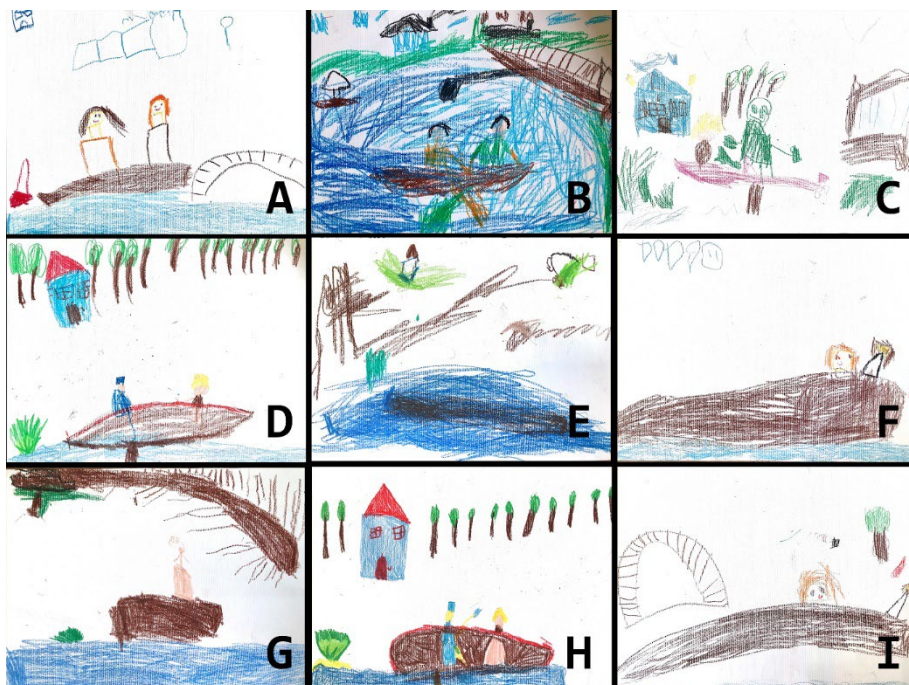


Figure 5: Children's depictions of Renoir's entire painting.

In this case (Figures 5A, B, C, D, E, and H), the typical symbol for the motif of a house as drawn by children can again be observed. In none of the children's works of art did we see the child draw at least an approximation of the house as depicted in the shown artwork instead of the classic symbol for a house (Figure 3).

In the second example, we were interested in whether children would notice the sailing boat motif and how they would draw it. As can be seen in Figure 4, the sailing boat appears in half of the examples, i.e. in Figures 4D, E, F, and G. Its image is simplified and symbolic, consisting of a triangular sail at the top, a rectangle representing the boat at the bottom, and a piece of mast connecting them (Figure 6).

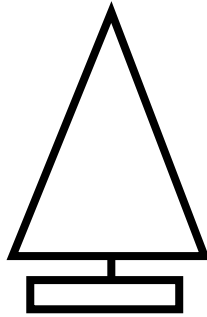


Figure 6: A child's drawing of the symbol for the motif of a sailing boat.

This depiction is not unusual, as the artist also used the same symbol in the painting. In cases where the children were observing and recreating the entire reproduction (Figure 5), the sailing boat motif was only one of many, so it was expected to appear in fewer instances. This is indeed the case, as the sailing boat can only be seen in example 5B, and, with some imagination, can also be recognised in examples 5A, F, and I. However, in these cases, the triangular shapes may not even represent a sailing boat at all, as they are not located on the corresponding side of the given sheet of paper.

It is also interesting to note that children were drawn to a motif that we had not specifically focused on when preparing the study, i.e. the motif of a tree. This motif appeared spontaneously in several drawings, for example in 4C, D, E, F, and G and in 5D, H, and I. This indicates that children enjoy drawing what interests them and what is familiar to them. The motif of the tree is the same in all the drawings where it appears. Here we again see a classic first-level symbol. The tree consists of an upright rectangle representing the trunk and a circular shape representing the crown. If the shape is round, it represents a deciduous tree and if it is triangular, it represents a coniferous tree. Since children could use various colours in this activity, the symbolic influence of colour is also visible, with the trunks being brown and the crowns being green.

In the third example, we were interested in how children depict the human figure. In the observed artwork, the human figure is not depicted in its entirety, as only the upper part of the figure is visible. This is referred to as a cut-out. Given that preschool children draw what they know about the subject and not what they see,

we assumed that children would draw the human figure in its entirety, i.e. not only the upper part of the torso, but also the legs. When a child draws a rider, even if they cannot see one leg, they will still depict both legs. If they are observing a person looking out of a window whose body they cannot see, they will nevertheless draw it. We found that children in our study used both methods. Some drew the figures in their entirety, even though the lower part of the torso is not visible in the observed motif (Figure 5C, Figures 7A, B, E, and G). It is interesting to note that we observed a difference between the two approaches. In the case where the children depicted the reproduction in its entirety (Figure 5), the human cut-out was taken into account to a greater extent (Figures 5A, B, D, F, G, H, and I). However, when they were completing a partially obscured reproduction, they also drew the legs in several cases, i.e. what is not visible. They “made up” the lower part of the body. The full figures appear in several examples (Figures 7A, B, D, F, and G). This is interesting, as the observed difference suggests that the depiction of motifs can be influenced with didactic approaches. At the same time, this phenomenon can also be linked to Jacqueline Goodnow’s (1970) observation that the complexity of depicting a specific motif depends on its role in the child’s overall drawing. If a child is drawing only one human figure, they will focus on that figure to a greater extent. However, if the human figure is only one part of a larger motif, such as a group of children playing in a playground, the child will pay less attention to individual figures.



Figure 7: Children’s depictions of the human figure based on Renoir’s painting.

In the next example, we were interested in how children depict the chosen third-level motif. Streetlights are not a common motif in the artistic expression of preschool children and therefore children do not have a developed symbol for them. This symbol is only created on the basis of instructional stimuli. Our study presented children with different models of streetlights (Figure 2), many of them very simple.

Four of them had only one lamp at the top of a straight pole (Figures 2A, B, C, and F). One streetlight had two lamps (Figure 2G) and one streetlight had three lamps (Figure 2D). Three streetlights with single lamps were very simple, with the lamp mounted at the top of the pole (Figures 2A, B, and F). Two streetlights with single lamps were a little more elaborate, with an additional element at the top, directing the light from the lamp downwards (Figures 2C and E). These streetlights provided the children with different visual impressions. By analysing the children's artwork, we found that the children were mostly drawn to the simplest image, i.e. the streetlight with a single element at the top of the pole. There were nine such works. Some children drew only one streetlight, some drew several. Interestingly, the simplest streetlights were without exception drawn by those children who drew only one streetlight (Figure 8).

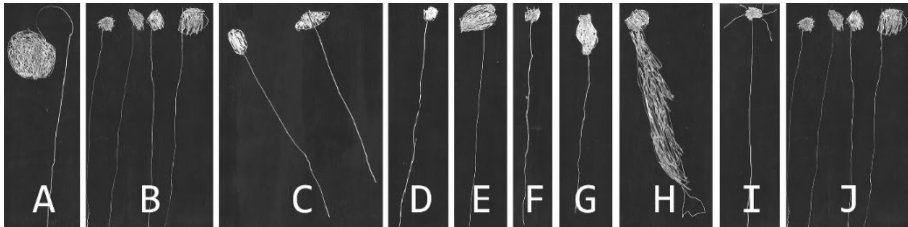


Figure 8: Children's drawings of simple streetlights.

Looking at Figure 8, it is clear that there is just one example (Figure 8A) where the child who drew only one streetlight did not choose the simplest one, but rather the one with the lamp pointing downwards. Furthermore, there are two interesting examples (Figures 8B and J) where the child drew several streetlights, but still kept to the simplest depiction. This suggests that the basic symbol for a streetlight consists of a vertical line and a circle at the top. The outline of the symbol is presented in Figure 9.

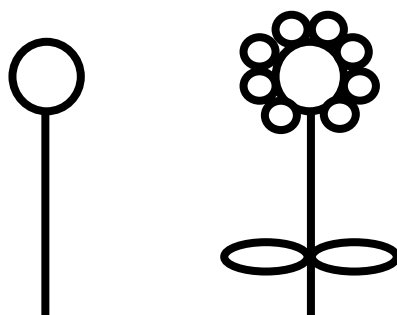


Figure 9: A child's drawing of the symbols for the motif of the streetlight (left) and the flower (right).

We can see that the symbol for the streetlight is very similar to the basic symbol for the flower (Figure 9), which falls into the category of first-level symbols. This confirms the well-known thesis that children use a single symbol for depicting different motifs (Goodnow, 1970; Arnheim, 2009; Zupančič, 2001, etc.).

When analysing the other drawings of streetlights, the following was established. Children who chose to depict more complex streetlights were particularly drawn to the two that had the lamp pointing downwards. This appears independently in three of the drawings (Figures 10A, B, and D) and in combination with the other elements also in Figures 10C and E and Figures 11B and E.

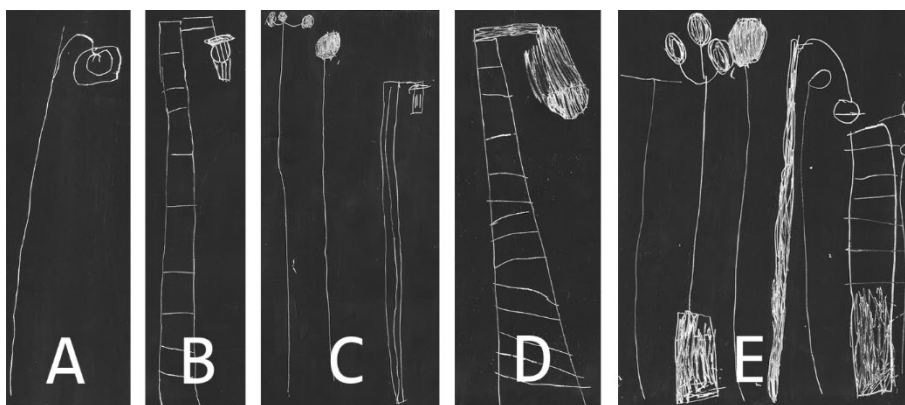


Figure 10: Children's drawings of complex streetlights.

The examples in Figure 11 show that children were equally attracted to the streetlight with three lamps (Figures 10C and E; Figures 11A, C, E, and F). Interestingly, none of the children depicted the streetlight with two lamps (Figure 2G). This may be because the two lamps on this streetlight are shaped as elongated, narrow rectangles, which the children may not have noticed at all. The round, clearly visible circular shape is more in line with the child's concept of a lamp, such as light bulbs.

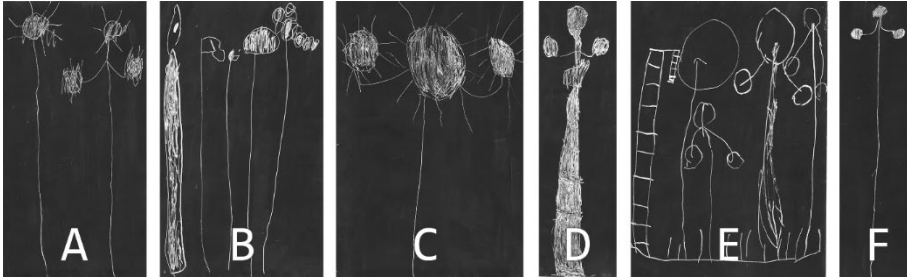


Figure 11: Children's drawings of complex streetlights.

Our analysis allows us to make the following observations. When drawing new motifs, preschool children employ two different approaches. In the first case, they use simplification and develop their symbol based on one they already know. They add or take away elements and create a new symbol. In the examples of children's artwork in Figure 8, it can be seen that the child has created a simple symbol of a streetlight from the symbol of the flower by removing the two leafs growing to the right and to the left from the stem. The child also removed the flower petals (Figure 9). In the second case, children are attracted to unusual visual characteristics in the new motif. In our case, children were drawn to the "three-headed" streetlights and the curved streetlights with their "drooping" heads. The thesis that children are attracted to the unusual is further supported by the examples of drawings of the streetlight that has a different pole (Figure 2E). This pole is not a simple vertical rod, but rather a double rod that is connected by horizontal elements. Such a pole looks very much like a ladder. This visual feature attracted several children, and they drew it very clearly (Figures 10B, D, and E; Figure 11E).

No direct evidence exists for the following claim; however, we can reasonably infer the following. A child's decision on which strategy to adopt when creating a new visual symbol is related to their stage of artistic development. We make this claim

on the basis of the following fact: the more complex drawing of “multi-headed”, “drooping” and “ladder-like” streetlights appears in drawings where children have drawn several different streetlights. The fact that a child drew several streetlights (even though this was not a requirement and some of them only drew one) indicates a greater interest in artistic expression and longer periods of concentration on the part of the child. Both of these are signs of a higher developmental stage.

4 Conclusion

The results of the study allow us to conclude that there are differences in the creation of symbols of different levels (RQ1). First-level symbols, i.e. the symbols that children develop first, are deeply ingrained in the child’s consciousness and therefore difficult to change. Even when presented with a different house and in direct observation, children draw the house as a classical symbol (RQ2). The same applies to second-level symbols. When drawing the sailing boat, the children depicted a classical symbol (RQ3). However, it is true that they were drawing the sailing boat based on a work of art where the artist also used a simple symbol. This aspect warrants further research. A new study could offer children photographs of different types of wind-powered vessels and observe how they draw them based on visual impressions. The study could be designed similarly to how we structured the work with the streetlight motif in this study. The most significant deviation from the established ways of creating symbols was observed in the drawing of streetlights (RV4). Two different strategies were identified. Some children resorted to simplification when creating a new symbol. These children used an already familiar symbol and modified it accordingly. Other children delved into the visual impressions and created a completely new symbol. The thus created symbol did not resemble any known symbol from before. We presume that this occurs in older preschool children and is associated with a higher level of artistic development. Some of these drawings (Figures 10 and 11) are so complex that they already go beyond the symbolic stage of drawing.

Based on the findings of our study, we propose that new terms be introduced. We propose the term determinate symbols to be used for the basic symbols in children’s drawing, which develop first and spontaneously. This category includes motifs of the human figure, house, animals, plants, the sun, clouds, etc. For the second type of symbols, we propose the term mixed symbols to be used. This category includes

all sub-types of motifs that appear later, such as various types of vessels, different modes of transportation, various types of plants, different animal species, and so on. Children develop these symbols partially on the basis of their knowledge of the subject and partially on the basis of visual impressions. For third-level symbols, i.e. symbols which children do not develop spontaneously but start drawing when given appropriate instructional stimuli, we propose the term open symbols to be used. This category includes the streetlights used in this study. This category could also include a range of everyday objects that surround us and which we reasonably believe might be of interest to older preschool children.

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