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Reality as It Is Expressed Through the Drawings of a Blind Child

SUMMARY

The following article focuses on the problem as to how the knowledge of reality is reflected in the drawings created by a child completely blind since birth.

To analyse a drawing made by a blind person, I try to reach this fragment of knowledge in the mind of the author that generates the phenomenon created in the drawing. Therefore, I try to determine the scope of knowledge about the phenomenon by having a conversation with the child about his experiences, such as:

- sensory experiences acquired through tactile perception, as well as other senses,
- knowledge about the phenomenon contained in the mind (cognitive model).

The subject of the analysis will concern convex drawings on the micro-grooved foil. The analysis tool will comprise of the model showing the content and form of the drawing, the creativity and the emotionality of the illustrator. These analyses will be compared and verified in accordance with the stages of the drawing skills of sighted children. I determine these stages using the studies of Szuman (1990), Lowenfeld and Brittain (1977) and Luquet (2001/1927). This tool takes into account current knowledge about art, stages of child's plastic development and the abilities of blind people.

Key words: blind people, drawing, language, the picture of reality in the mind, stages of artistic development, a model of artistic creation

The modern concept of speech-language pathology, as a science about biological language behaviour, implies that speech disorders concern all spheres of language use¹. According to the study of language functions, we know that language participates in the cognition of the world (*Theory of speech disorders*.

¹ See Grabias S., 2012, *Teoria zaburzeń mowy. Perspektywy badań, typologie zaburzeń, procedury postępowania logopedycznego (Theory of speech disorders. Research perspectives, typologies of disorders, speech therapy procedures)* "Logopedia. Teoria zaburzeń mowy (Speech therapy. Theory of speech disorders)", Lublin, UMCS.

Research perspectives, typologies of disorders, procedures of speech therapy). Speech therapy translates sensory experiences into intellectual categories of language, and it is a tool in the transmission of information that participates in the socialization of individuals (it organizes social life)². This article concerns the cognitive functions of language. My intention is to show the problem of how the language copes with the image of reality in a situation where the interpretation of sensory experiences takes place without the use of sight. I am interested how the blind conceptualize certain phenomena and how it affects the projection of reality shown in their drawings.

IMAGING OF REALITY, BUILDING A PATTERN – CONCEPTUALIZATION

By illustrating objects and phenomena, the author of a drawing always performs a projection of knowledge about reality³. Drawing activity is therefore a vision of the phenomenon created by a sightless author on the basis of his / her intersubjective, hence linguistically acquired knowledge⁴ about the phenomenon, and on the basis of his / her own subjective experiences, especially those of the sensory character complementing intersubjective knowledge, as well as his / her own emotions.

It should be emphasized that images built on the basis of sensory experiences of the blind, as well as ideas about concepts that are inaccessible sensually (so-called surrogate images), will probably build a peculiar picture of reality in the mind of sightless people. As Z. Sękowska notices, surrogate images create in the minds of blind people alternative imagery, built on analogy, through linguistic explanations. For example the difference between colours can be explained by means of referring to the tonal systems of sounds. M. Grzegorzewska even suggests that ‘the blind live in the world of analogy.’⁵ Undoubtedly, phenomena such

² Grabias S., *Theory*, op. cit., p. 16.

³ I find a similar interpretation of the creative process in the seminal works of our literature: Poppek S., 2001, *Człowiek jako jednostka twórcza (Human being as a creative creature)*, Lublin, UMCS, pp 101–120; Hohensee-Ciszewska H., 1976, *Podstawy wiedzy o sztukach plastycznych (Fine arts knowledge rudiments)*, Warszawa, WSiP, pp 60–70; Wallis M., 1968, *Dzieje sztuki jako dzieje struktur semantycznych (History of art as the history of semantic structures)*, „Kultura i Społeczeństwo (The Culture and Society)” no. 2, pp 63–75; Nęcka E., 1995, *Psychologia twórczości (Psychology of creativity)*, Gdańsk, Gdańskie Wydawnictwo Psychologiczne; Pietrasiński Z., 1969, *Myślenie twórcze (Creative thinking)*, Warszawa, PZWS, pp 10–15.

⁴ Grabias S., 2003, *Język w zachowaniach społecznych (Language in social behaviour)*, Lublin, UMCS.

⁵ Sękowska Z., 1978, *Pedagogika Specjalna (Special Education)*, Politechnika Warszawska, p. 79, see also Sękowska Z., 1981, *Tyflopedagogika*, Warszawa, PWN.

as light and colour, as well as spatial relations⁶ that cannot be experienced by sensory cognition, are encoded linguistically. As S. Grabias points out⁷, it is the language that provides information and knowledge about the world, which is the organizing factor for all sensory experience that must be arranged accordingly in the mind of the human being.

It is extremely interesting for the researcher to observe how blind children describe the world around them, how they visualize their ideas of reality phenomena by drawing. It is also very interesting to determine whether there is a prototypical pattern in the drawings of these children and whether this pattern is consistent with the pattern of their sighted peers.

As it has already been mentioned, an artistic product is always a projection of knowledge about the reality of the presented phenomenon⁸, so by creating a work of plastic art the author builds a picture of phenomena based on:

1. Knowledge about the world
2. Sensory experiences
3. Emotions

It should also be emphasized that the image depicted by children will always be selective and intentional, so the reality in the drawing will present what is important for the author at the moment of creating the work⁹, and will omit what seems unimportant.

Appropriately tailored creative activities, including drawing, are available to the blind who create convex drawings on the micro-grooved film by stamping the shapes with a stylus and touch, thus controlling their creative idea¹⁰. The blind constructing the drawing, manage the line so that objects gain the shape, set the boundaries, place objects and phenomena in space. Sometimes sightless creators try to fill in drawings. Obviously there is no light and shadow in the drawings created by the blind, but according to the adopted definition of drawing ‘whose essence is to use the line on the plane, using a tool that leaves a trail’¹¹, their drawings appropriately match this definition.

⁶ Sękowska Z., 1978, op. cit.

⁷ Grabias S., *Język (Language)*, op. cit., p. 16, see also: *Mowa i jej zaburzenia (Speech and its disorders)*, „Audiophonology (Audiofonologia)” Vol. 10, 1997, pp 9–36.

⁸ S. Popek: *Człowiek (Human being)*, op. cit., pp 101–120; H. Hohensee-Ciszewska: *Podstawy (Rudiments)*, op. cit., pp 60–70; S. Morawski: *O realizmie jako kategorii artystycznej (On realism as an artistic category)*, „Etyka (Ethics)” 1960, no. 2; M. Wallis: *Dzieje sztuki (History of art)*, op. cit.; E. Nęcka: op. cit., pp 11–14; Z. Pietrasiński: *Myślenie (Thinking)*, op. cit., pp 10–15.

⁹ Lowenfeld, V., Brittain, W.L., *Twórczość a rozwój umysłowy dziecka (Creative and mental growth)*. Warszawa: PWN, 1977.

¹⁰ Drawings made by the blind are created in a convex form, on a special drawing foil for the blind, see Piskorska A., Krzeszowski T., Marek B.: *Uczeń z dysfunkcją wzroku na lekcji angielskiego (Visually impaired pupil at the lesson of English)*, Warszawa Uniwersytet Warszawski, 2008.

¹¹ <http://www.encyklopedia.sztuki.info/> from 26.05.2014.

Undoubtedly, this is an extremely difficult process, because blind authors must create a representation of three-dimensional objects on a two-dimensional plane, scale the picture and make an attempt to arrange it in the space of the page. The blind must also correctly place the individual elements of the object being pictured, as well as determine the location of the object or phenomenon in relation to other objects in space¹².

RESEARCH PROCEEDINGS

To analyse the picture created by a blind person, I try to reach this fragment of knowledge in the mind of the author that generates the phenomenon created in the drawing. Therefore, I try to determine the scope of knowledge about the phenomenon, talking with a child about his experiences such as:

- sensory experiences acquired through tactile perception, as well as other senses,
- knowledge about the phenomenon contained in the mind (cognitive model).

To obtain this knowledge, I use the interview method, implementing the following scenario:

1. What / Who is this?
2. What does it look like?
3. What does he do? (animate) / What is it for? (inanimate)
4. Where does he live? (animate) / Where is it? - Where is it placed? (inanimate)

In the research procedure, I also take into account how the author evaluates his drawing after the creative process has been completed:

- evaluation of aesthetic values of the drawing: do you like your drawing (is it nice or ugly)?
- creativity: do you think your drawings are original and unique performances?

Drawing analysis also includes my own comments and assessments, which I will make using a model constructed on the basis of knowledge about art, knowledge of the stages of child's plastic development¹³, and on the basis of a questionnaire assessing the content and form of the drawing, as well as the creativity and emotionality of the illustrator¹⁴.

¹² Chojecka, A., Magner, M., Szwedowska, E., s. Więckowska, E. FSK, *Nauczanie niewidomych dzieci rysunku (Teaching blind children drawing)*. Łaski: Society for the Care of the Blind and Visually Impaired, 2008.

¹³ Based on the classifications of the stages of drawing development proposed by S. Szuman, V. Lowenfeld and G.H. Luquet (see Szuman S., 1990, *Sztuka dziecka (The art of a child)*. Warszawa: WSiP; Lowenfeld, V., Brittain, W.L., *Twórczość (Creative)*, op. cit.; Luquet, G. H., 2001/1927, *Children's Drawings/Le Dessin Enfantin*. London: Free Association Books.

¹⁴ I used the model from the book by E. Niestorowicz (2007).

The test group

The study group consisted of 36 people completely blind since birth, intellectually normal, and at different ages. The research was carried out at the Professor Zofia Sękowska Special School and Educational Centre for Children and Teenagers with Disabilities in Lublin, at the Special School and Educational Centre for Blind and Visually Impaired Children in Krakow, at the Louis Braille Special School and Education Centre for Visually Impaired and Blind Children and Teenagers in Bydgoszcz. Blind students of the Catholic University of Lublin also participated in the study. Each of the examined persons made 9 drawings in accordance with the principle of gradation of difficulties: from drawings of the easiest phenomena, through increasingly difficult drawings of objects, to the drawings of a scenario (situation).

In the article, I present only one drawing entitled 'Football match' which depicts the scene proposed by the author, who is a completely blind, thirteen-year-old student. The drawing is presented in the opened perspective in accordance with the aforementioned description model.

Analysis of the drawing

The examined person: Michał, 13 years old, an elementary school student. He is completely blind since birth. He likes drawing but does it very rarely, occasionally. The theme of the drawing is a football match.

Opinions of the examined student while drawing:

Michał: This is how I imagine the pitch, when I play FIFA, we run right or left towards one of the goals. The goals are here (he shows them), but there are the sidelines here and there. But from the goalkeeper's point of view, who is playing in goal, it would look differently. Because he is in goal, and there are the sidelines, and here is the end line and there are the goals on the end lines. There is the goal here, the defender is shooting here, and here, there is the corner.

Michał: Okay, I will somehow draw this pitch, but I do not know if I manage to draw my players. I'll start with drawing goals. I think the best way is to start from the goal. If the goal is here, there must be a crossbar behind it, which is longer than a post. The goal has a form of a rectangle that stands on its length. The post is the length, and the crossbar is the width, so here is the crossbar because it is bigger, and as for the post, I don't know. Let's say that this is the post. Okay, here is the goal, I built the circumference of the goal, but I think that the posts are slightly uneven, I don't know. Because the left one, I mean the one on the right side from the point of view of the shooter, might have gone off the page and I don't know if it's not too long.

E.N.: It's fine. (Michał begins to plan individual elements of the pitch and the presented scene on the surface of the card. It is a very difficult procedure also for sighted children.)

Michał: And is this post ok, or almost?

E.N.: In fact, it is almost ok, but it will never be perfectly even.

Michał: Well, here's the goalkeeper.

E.N.: Who is playing in goal?

Michał: Neuer, of course (the goalkeeper of Bayern Munich). Maybe now we will make such a thin line and it will be the turf that touches the goal. It touches the goal slightly and the goalkeeper stands on this line. I was a goalkeeper and from my experience I know that a goalkeeper does not stand in goal but in front of it to bounce the shot. I used to shoot 11, that is, from 11 meters.

E.N.: Did you score?

Michał: I did, but probably because my sister was a goalkeeper. Girls are worse at that. My goalkeeper is standing here. Here we have the turf line and the goal. The goalkeeper is standing here, because he is in front of the goal. We will not put him in the goal. He is in the middle of the goal, let's say. What is problematic for me, for example in FIFA, are penalties, because I can't aim, it is possible to shoot directly, but I can't do this. Here, I'm drawing a shot on the goal. It went off the post, a little. I guess I didn't draw the picture of the goalkeeper quite well.

The goalkeeper in Michał's drawing partly coincided with the goal's outline, so the author considered it a mistake and began drawing from scratch.

Michał: I would like one more page, I will start again, because the goalkeeper can't be where he is now. The players will be rather small, but it is because of the size of the page, you know. The goalkeeper is outstretching his arms to intervene because he has to defend the shot. And here is his head and I guess there won't be enough room for other players. Well, the goalkeeper is ready, but as I said, probably other players will not fit. They are slightly in front of him, right? Because this goalkeeper is kind of in the background, I don't know if they will fit. I will try to make 4 defenders in front of him, because it is so typical of Barcelona (Michał supports this team). And here, there will be some little defender. He must fit. Oh boy, they probably will not have heads, because they will not fit. And I will make defenders here. And this will be a midfield player. Oh no, I didn't arrange it properly.

E.N.: Michał, this is a very difficult task, also for the sighted.

Michał: If you say so, I feel better. All in all, this drawing is great. Yes. Oh, there's the first player here, he's just here so that his legs are ok. Each leg is in a different direction, oh, well, at worst I won't make it. And here will be such a small head, because the bigger one will not fit. Okay, we have two defenders. One of them has a bent knee, because he is kicking the ball, and I've already bent his knee. Here we have the defender's legs and they need to be paired. Oh, here is the

whole big goalkeeper, and how many heads are here? One, two, three and four. Fine. And let's say we have a goalkeeper and three defenders. I will not draw eyes and faces, because even though they (players) are far away, it can be seen that they are footballers.

Michal: Well, unfortunately, I've finished. It's a pity, because it was great. I'd like to draw the remaining players, but I have to go to class, because I'm nearly late. But it was great. The last drawing is just a mega masterpiece. I think it is original and great. I haven't seen such drawings before.

E.N.: So you have succeeded in making this drawing, right? Are you satisfied?

Michal: I am very happy, especially because of the second drawing, I really like drawing, but I have few opportunities to draw.

I. First layer – Content

The content of the drawings was imposed, although it was possible to choose from one of the following themes: I'm going for a walk / playing football / playing in the yard / spending free time.

The way of capturing reality

The drawing is a simplified icon of reality. It contains a prototypically socialized image that includes the general simplified scheme features. It also has specific features of the depicted phenomena.

II. Layer two – Form

1. Capturing the phenomenon

1.1. Ability to perceive elements of the object as a whole (synthesis of the whole)

Synthesis of the whole: a synthetic drawing, individual elements connected, though distorted. The drawing shows the whole, the full form of the imaged objects.

1.2. Correlations between the parts of the phenomenon in relation to the whole (proportions, arrangement of parts in whole)

a) Number of parts depicted in the drawing

Players in the picture have all basic parts of the body, apart from face, ears and clothing elements. Only two of the portrayed silhouettes have a neck. All elements of the drawing are simplified and to a great extent constitute a synthesis of the depiction.

b) Proportions of individual elements within the phenomenon

The proportions of the depicted persons are simplified. Some parts of the body are exaggerated, for example, the torsos. Due to the author's difficulty of

arranging the characters, not all elements of individual parts of the body are proportional, because otherwise they would not fit on the canvas, for example heads of some players are significantly diminished.

2. Contour

Contour has geometrical features. At the same time, the author gives it an individual style, which can also be seen in drawings of sighted children. The contour proposed by Michał is determined, drawn assertively yet gently, and some elements in the drawing are differentiated by a few strokes of the stylus. Contour lines usually close individual elements of the form and are arranged according to the scheme.

3. Shape

There is a simplified geometric shape in the drawing, which is characterized by a reduced number of elements and a change in the proportions, so the following can be observed:

a) linear shape

– elongated - built on the line - limbs are built with the use of thin lines, the same concerns feet (though not every player in the drawing has them),

b) geometric shape

– oval – built on the circle – heads of the players, which are sometimes oval, and sometimes resemble a shape between an oval and a square; some of the players' torsos, which look like something between an irregular circle and a rectangle.

– polygonal – built on a polygon – the head of the goalkeeper and the second player, as well as the torso of some players, which resembles something between an irregular circle and a rectangle. The goal, on the other hand, is a successfully depicted rectangle.

All geometric shapes are distorted. The author has problems with drawing a circle, which is typical of the blind, though the ball is Michał's best rendition of circle in all of the studied drawings. It is possible to overcome the aforementioned difficulties by regular practising and drawing, which unfortunately is problematic for blind children, who draw occasionally.

4. Space

4.1. Spatial components

a) Size indicators:

The whole scene is reasonably well set on the plane, although the upper part behind the goal remains unused. The scene presents small silhouettes of four footballers and a goalkeeper standing in front of the goal.

4.2. Spatial organization

Figures of people are presented frontally in such a way that four defenders are shown on one side of the depicted scene, and on the other side we see the goalkeeper with the goal in the background (both the goalkeeper and the goal are in the frontal view). The ball is located in the middle (between the goalkeeper and the players), and is also in the frontal view. The whole scene is set on the principle of disassembling a model¹⁵. Sighted children, who are in a schematic period, also use such a way of depicting different scenes. The space resembles an unfolded mock-up, and some objects are shown upside down. Michał's drawing of a football match shows a similar, even prototypical, way of dealing with imaging objects on the plane. If the page is folded along the middle of the ball, both the goalkeeper and the footballers face each other on two sides of the page. This way of imaging is therefore most logical and, what is interesting, very similar to sighted children's way of depicting images.

The drawing scene is assumed to be two-dimensional, but because it is presented in the form of the so called "folding-out", it takes into account the plans in the image, does not take into account the perspective, but takes into account the base line, i.e. turf, which, according to the author, is the bottom line at the base of the goal.

5. Composition - the place of the image in space

5.1. Spatiality - the place of individual components of the drawing in space

The goal, the goalkeeper and other players are placed quite symmetrically on the plane, although the space behind the goal remains unused.

5.2. Setting individual elements of the phenomenon

The individual parts of the body of the depicted characters are correctly positioned. Although all of them are extremely simplified, they resemble the outline of the silhouettes. Such a way of drawing is natural, when many characters are drawn, though one should think that a sighted child would probably draw more details. However, the author must have been already tired (this was his 9th drawing), besides, he was afraid that he would not be able to properly arrange all the characters in the picture, so he mainly focused on this aspect. It should also be mentioned that dealing with setting tiny facial elements on the depicted figures would be really difficult. Apart from that, the author decided that there is no need to focus on that element as all the players are far away, and even though their faces are not visible, the depicted characters can still be identified as footballers.

¹⁵ Lowenfeld refers to this way of presenting objects as unfolding a mock-up, while Luquet calls them a drawing in the form of "folding out".

6. Movement in the drawing

One of the characters – the second from the left, is moving, because according to the author, the player is kicking the ball. This movement is shown by the activation of the lower limb. This approach is consistent with the one typical of sighted children who are in the period of the visual scheme. The first depictions of movement by sighted people are also executed by launching the limbs¹⁶. The rest of the scene remains static.

III. Third layer – creativity and emotionality of the product

1. Evaluation of aesthetic values of the drawing (assesses the examined child)

The author is very happy with the drawing. Although he is aware of the imperfections of some elements, he likes the end result very much.

2. Creativity

The respondent considers his last drawing as an original, unique work. He claims that he has never seen such a drawing.

SUMMARY

The examined person was thirteen-year-old Michał, a pupil of the 6th grade of primary school, completely blind since birth. Nine drawings were analysed, their themes and content had been previously chosen for the pupil.

Most of the studied drawings certainly show features typical of the schematic period (ideoplastics). According to Szuman, this period occurs in 3–12-year-old sighted children¹⁷. In accordance with this classification, the phase of the simplified scheme, in which Michał's works are included, appears in children who are around 6 or 7 years old¹⁸. However, it should be emphasized that it is difficult here to clearly define the border, which seems quite fluid, and the analysed drawings often include details characteristic of the previous or following stages of artistic development. The Lowenfeld and Brittain¹⁹ classification also defines this stage as a schematic stage, but refers to 7–9 years of age in sighted children. According to this classification, the studied works can be approached as either the initial schematic phase or the final pre-schematic phase. Luquet²⁰, on the other hand, defines the period as visual realism, which, as in the case of Lowenfeld, refers

¹⁶ Szuman S., *Sztuka (Art.)*, op. cit.

¹⁷ Popek S., *Psychologia twórczości plastycznej (Psychology of artistic creativity)*, Kraków, Impuls, 2010; Szuman S., *Sztuka (Art.)*, op. cit.

¹⁸ The phase of simplified schemes by Szuman occurs at the age of 5 to 7, see. Popek S., *Psychologia (Psychology)*, op. cit.

¹⁹ Lowenfeld, V., Brittain, W.L., *Creative*, op. cit.;

²⁰ Luquet, G. H., *Children's Drawings*, op. cit.

to children who are 7–9 years old. Considering this typology, Michał's drawings can be assigned to the initial stage of visual realism, or to the final stage of intellectual realism²¹.

Therefore a delay in the drawings of the examined child can be observed. However, it is extremely interesting that these drawings represent the phase of a simplified scheme, as in the case of the drawings of Michał's much older blind acquaintances, who are at the age of 17–20. Despite the signified delay, the drawing development progresses quite similarly to the sighted children, although one can certainly observe the features characteristic of a different sensory cognition. It should also be emphasized that although the studied pupil had dealt with drawing, his drawing routine was at best rare. Through the observation of the creative process, it was possible to notice how he gradually gained self-confidence and manual agility.

A characteristic common feature of most of the studied drawings is their two-dimensionality, though attempts to perform with a plan view from above are sometimes made, which gives the effect of gaining depth. There are also unusual features for drawings made by the blind, e.g. in a drawing of a table, the author takes into account the perspective display of the table legs, where the two in the background are much shorter than those in the foreground and clearly move away from the observer. In the analysed drawing, there is therefore an outline of the first and the second plan. Additionally, in the work depicting the football match, the author attempts to show the base line²², which in his opinion is the line at the base of the goal, symbolizing the turf. Some points of reference are also sometimes introduced into the drawing (e.g. in the drawing a table – a plan view from the top and a frontal view, or a frontal and profile view in the drawing of a dog), which is also characteristic for the sighted children who illustrate the phenomena using canonical views²³, in this way trying to depict all knowledge about the object through the most characteristic views.

The last drawing that depicts a football match is a very simplified yet sophisticated and nicely composed picture. It should be noted that this is a somewhat brave compositional attempt, in which the author showed a very good orientation in the space of the page. It is interesting to arrange the scene as a kind of disassembled mock-up, which, as it has already been mentioned, is typical of sighted children at the schematic stage. In this drawing, the method of coping with imag-

²¹ Schaffer H., *Psychologia dziecka (Child psychology)*, Warszawa, PWN, 2005.

²² The base line, which, according to Lowenfeld, means the relationship between the imaged figure and the surroundings, appears in 96% of 8-year-old sighted children (see Lowenfeld i Brittain, *Twórczość (Creative)*, op. cit., p. 97).

²³ The canonical perspective – the imaged object is presented in the most typical and characteristic view (see Francuz P., 2013, *Imagia. W kierunku neurokognitywnej teorii obrazu (Imagia. Towards a neurocognitive image theory)*. Warszawa: SCHOLAR.

ing objects on the surface is even prototypical, both the goalkeeper and the goal are presented in a frontal view, and bending the card from two sides of the ball makes the goalkeeper and other players stand opposite each other. It is extremely interesting that individual bodily parts of the depicted characters are simplified to such an extent that they resemble silhouettes seen from a long distance. Such a way of drawing is natural when many figures are drawn, but most likely a sighted child would include more details in the drawing. The author decided that there is no need to do so, because the players can be identified anyway. This way of interpreting reality by a completely blind person is unusual as it would be more typical of a sighted adult.

In this drawing, the examined pupil also shows the character in motion through actuating the lower limb. This is in accordance with the convention of the sighted children who are in the period of the visual scheme and in such a way depict the first figures in motion²⁴.

Drawings, in accordance with the schematic period, show geometric shapes, and some of the elements, e.g. limbs, are depicted with a one-dimensional line that is not sufficiently thick²⁵. This way of drawing is also typical of sighted children at the beginning of the period of forming simplified schemes (4–6-year-old children). In Michał's work, there are drawing difficulties characteristic of blind children, such as lack of finding the point, that is a place in which a child intentionally attempted to hit, or trouble in closing figures, that is, finding a place where drawing started. However, these difficulties occur rarely.

Geometric shapes in Michał's drawings are full of distortions, which occur in the majority of drawings made by the blind, and are visible in straight lines, circles and polygons. Certainly drawing a straight line or a circle on a foil rather than on an ordinary sheet is a much more difficult manual exercise because it is necessary to dose force and pressure appropriately, so that the line can be felt by touch, but not leading to cuts. You cannot use an eraser on the foil (Michał copes with mistakes by blurring a failed item, e.g. a hand, in a drawing of a man). These difficulties can also be observed in the author's statements, e.g. while drawing a house, Michał exclaimed: *the foil is jamming*. The phrasing is quite accurate because when the drawing tool is pulled incorrectly, burrs are created on the drawing line, and the movement is not smooth, but slowed down.

²⁴ Szuman S., *Sztuka (Art.)*, op. cit.

²⁵ Szuman calls such a method of drawing the limb – “a straight line corresponding to the main axis of the limb”, therefore the child is fully satisfied merely with the length of the shape being pictured. This is a phenomenon occurring in 75% of 4–6 year-old children. Older children add thickness to the length, creating a two-dimensional limb, “encircling them with a contour line”. This method of imaging can already be found in 80% of 7–9 year-old children (see Szuman, S. *Sztuka (Art.)*, op. cit., p. 41)

Despite the problems related to the deformation of shapes, drawing development is similar to that of sighted children, although it is delayed and sometimes contains specific features of tactile cognition of the world. As it has already been emphasized, the delay in drawing development of the blind children in comparison to their sighted peers is caused by only occasional exercising of drawing among the blind.

Following the boy's statements, we can see that Michał's knowledge about reality is shaped linguistically, because he knows exactly what point of view he presents as the author of the scene, and that the point of view of the goalkeeper will be completely different. The author also makes attempts to depict the players, not caring about the details in the appearance of individual characters, because in accordance with his knowledge, the further away from the observer, the more details become blurred.

It is extremely interesting that Michał's drawings present the stage of a simplified scheme, similarly to the drawings of relatively older blind people, who are at the age of sixteen, seventeen and twenty. What's more, it seems that the thirteen-year-old pupil shows a lot more enthusiasm, less worries related to technical difficulties, and has more confidence than his older acquaintances. This approach is certainly in line with the theories proclaimed by the researchers studying drawing development of sighted children, who are prone to experience a creative crisis once they have turned thirteen, or fourteen years old.²⁶ To sum up, the studied drawings mostly present prototypical approaches characteristic of the sighted people, although sometimes they introduce subjective images based on individual sensory experiences into the scheme. The examined author, by using the knowledge gained through the use of language as well as his own experience, shows a very interesting vision of reality, creating its drawing representations on the plane. Despite difficulties, the examined pupil copes well with the space orientation of the card. He also demonstrates high manual efficiency, and also derives pleasure and satisfaction from both the creative act of drawing and its effects in the form of the finished work. Probably the exercises and stimulation in the artistic field would contribute to achieving greater drawing efficiency, and perhaps it would allow the examined author to move up to the next stages of artistic development. It is extremely interesting that a thirteen-year-old pupil spontaneously reached the stage of a simplified scheme, like his much older, blind acquaintances.

²⁶ Szuman S., *Sztuka (Art)*, op. cit., Lowenfeld V., Brittain W., *Creative*, op. cit.

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