

EXPLORATION OF THE WORLD BY ELEMENTARY EXPERIENCE OF MOVEMENT

EXPLORAÇÃO DO MUNDO ATRAVÉS DE EXPERIÊNCIAS ELEMENTARES DE MOVIMENTO

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ABSTRACT

The present article discusses the relationship between children's motor activities and their perception of our world. For children, motor activity is a way to understand the world. Taking this assumption as a starting point, the article focuses on anthropological ideas that intend to explain how the understanding of our world through motor activity can be a vital part of the elementary education of human beings. Thus, the relations between motor activity and development, perception and motor activity will be discussed. These relations are illustrated, for instance, in the explanation of the symbolic meaning of motor activities. Funke-Wieneke (1997) has defined four functions of movement that support the physical development of children. Based on these themes, functions that demand motor activity are introduced and performed, thus providing support for children to understand our world through motor activity.

Keywords: Motor Activity. Movement. Anthropology..

AGAINST THE DECLINE OF THE LEARNING CULTURE

In 1976, the writer Herman Peter Priwitt published an article entitled "Against the Decline of Hearing and Seeing", in which he points aspects of the cultural destruction as a consequence of economic processes that threat to deprive human beings from their senses and, thus, from their culture too.

It was published in a period when many people were convinced that teaching in Germany needed a fundamental reform. In fact, there were several proposals of change committed with the knowledge of the old reformist pedagogy, according to which learning should be comprehensive and involve all senses. Thus, initiatives against the decline of the knowledge culture, for instance, emerged. But, once again, the inertia of the insufficient status quo prevailed – or the blind conviction that the German public education continues to be the best in the world. Then, the flawed TIMSS was followed by PISA. Finally, it seemed that the politicians and the interested audience had recognized the need for a deep reform. Questions concerning the quality of institutions of elementary-pedagogical and academic education were focused in the political discussion. Thereby, educational institutions of elementary pedagogy were criticized, especially those that demand less from children and, consequently, do not take advantage of the existing "human resources". This assessment was and is flanked, that is, supported by the discoveries about cerebral research, which confirm the importance of the first years of life for human development (Huther, 2007). As an example and proof, there is the area of linguistic fomentation. The results of the PISA and OECD study draws attention to the fact that the chances of formation greatly depend on the linguistic skills of children. Since then, means of promotion and financial resources are being invested in the linguistic

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fomentation around the country. However, as Zimmer (2008, p. 255) observes, “a worrisome trend of isolated fomentation of linguistic skills” is being registered, which strongly reminds us of the educative-linguistic materials (“Sprachtrainingsmappen”) of the 1960s and 1970s (Schuttler-Janikulla, 1971). The linguistic fomentation is determined according to functional orientation; comprehensive conceptions, like connecting movement and language, are not taken into consideration.

The example of linguistic fomentation shows: “Efficacy”, “excellence”, “output”, fomentation of human resources, “human capital”, which are terms that currently have a conjuncture. These terms clearly express that: the current demand is the immediate and superficial economic profit only. Formation seems to be important, especially from the technocratic-economic perspective. As part of this context, there is also the hierarchizing of the school subjects that follow the formulation of pattern: German, mathematics, the first foreign language and natural sciences are prioritized, and artistic-cultural subjects, for instance, are regarded as secondary. In my opinion, a similar development can be observed in the sphere of elementary education: kindergarten schools feel practically obliged to include basic elements of the elementary school education in their activities and introduce children to calculus, writing, reading and foreign language learning. It is true that this must happen through ludic activities, but with seriousness and the purpose necessary.

The theoretical-pedagogical discussion on the result of the compared evaluation, which is happening in the sphere of the Science of Education, show that formation has to be more comprehensive than the fomentation in nuclear subjects, whose results can be easily seen and evaluated in comparative tests at national level. In the center of this discussion is the debate about the concept of learning, which is increasingly based on the teaching of verifiable knowledge. Thus, this debate emphasized that the poor performance of German students cannot be attributed to insufficient school knowledge, even because they were not evaluated, but rather to the lack of basic competences, such as the ability of solving problems in an autonomous and constructive way. According to Fauser (2002, p. 42), “learning must be understood as a process toward forming conceptions”. It is about, therefore, something more than compensating the lack of knowledge: in ways different from the comprehension of the world in the confrontation with objects, situations and themes of the world. Regarding this understanding of formation as comprehension of the world, it is worth questioning if the knowledge and the comprehension of the world through motor action should not be understood as part of the elementary education of the human being. In this case, it is not one more basic competence along with others (like the linguistic skill), but a sensitive foundation and the fusion of that and other basic competences. The focus of my following consideration is justly this thought of comprehension of the world through motor action from an anthropological perspective, presenting the importance of the movement as “access to the world” for children. In the second stage, I will explain the connection between movement and development, and then, in the third stage, I will address the specific connection between movement and perception, in which the process of comprehension of the world through motor action can be fundamentally explained

THE MOVEMENT AS ACCESS TO THE WORLD

The bodily comprehension of the world is the basis of the processes of formation since birth, and keeps being so throughout life. Bodily comprehension is always linked to movement. In this anthropological disposition, movement represents for children the fundamental access to the world. “The world of the children is the world of movement” (EFINI, 1982). Children face the world and what surrounds them with curiosity. They want to conquer their world of life actively, that is, conquer them through the movement and

discovering and searching things that surround them. Thereby, they constantly intend to palpate objects, touch them, smell them and grab them. With these sensorial experiences, they obtain images of the world. They understand that this or that thing is an object with certain characteristics and regularities that leave vestiges in their emotionality, in their capacity of learning and thinking, and in their motor development.

Movement is a child's way of facing the social and material world. Dealing with the possibilities of physical movement in a ludic way creates a bridge on the way towards reality. Being able to move, to experience the body through movement, is an important step for the child's autonomy.

Just as "speaking" and "thinking", "moving" is also a fundamental mediator between the child and the world, between the interior and the exterior. Moving is the form of life of children, and means for most of them the pleasant perception of existing. Their experiences involve several kinesthetic sensations: weight and lightness, speed and rhythm, interaction of external and internal forces, change of position of the body in the space and time (FAUST-SIEHL, 1996, p. 96). These sensations occur when children run, jump, oscillate and swing, spin and dance, do somersaults, or balance themselves. Children acquire social and esthetic experience when they represent something through the pantomime and act out to somebody, dive in the group, configuring with it a process and separating themselves from it again, establishing relationships with the space toward exploring it, creating a temporal order through rhythmicity. In these cases, children construct multiple social, material and kinesthetic experiences that are irreplaceable for the process of self-perception.

THE RELATIONSHIP BETWEEN THE MOVEMENT AND THE DEVELOPMENT – AREAS OF MOVEMENT THAT FOMENT THE DEVELOPMENT

With the works on psychological development by Piaget (1973), Bettelheim (1983) and Spitz (1969) we know that children acquire knowledge of the world by means of the active confrontation with it. Thereby, they seek to configure the things of the world in a way that is correspondent to their sensitive-bodily experience. About that, Maraun (1983, p. 38) writes: "Just as knowledge begins with experience, experience begins with its own actions and implies a sensitive-bodily dimension"; about the question of experience see Hildebrandt Stramann (2009). Children comprehend the world less through their cognitive skills, thoughts and imagination, and much more through their senses, body, and action of movement. For this reason, the fomentation of the motor development of children is a central task of the elementary pedagogy.

Funke-Wieneke (2004) distinguishes four functional areas of moving in which the development of the movement of children can be fomented: the instrumental function, the social function, the symbolic function and the sensitive function.

The instrumental function refers to the understanding that children learn to move skillfully, confident with their senses and without greater fatigue, on apparatuses and with apparatuses in built areas and natural environments.

The social function refers to the relationship with other people through moving. It makes people establish relationships with each other, be able to move with others comprehensibly and sensitively, in a cooperative and oppositionist way, at a certain level of challenge and mutual support.

As a principle, assuming and comprehending the movement is something "symbolic". When perceiving what is happening, we simultaneously interpret the sense the case has, to which it refers, what it represents. "And this does not happen through a process of assimilation that goes through several stages, since the sensitive – registration of the fact –, until the mental stage – interpretation of what has been perceived. The symbolic comprehension is the spontaneous and peculiarly human way of referring the world (FUNKE-

WIENEKE, 2004, p. 208). The development of children is fomented if they learn to express themselves by moving, that is, represent themselves or symbols by moving.

The characteristics of the sensitive function are feeling and palpating (FUNKE-WIENEKE, 2004, p. 219). In this sense, the sensitive function is a characteristic superior to the other ones, because palpating and feeling represent components of each action of movement. The basis for the explanation to the development of this and, consequently, of other functions, is the relationship between the perception and the movement, which I will explain (regarding the functions mentioned) next.

THE RELATIONSHIP BETWEEN PERCEIVING AND MOVING

I begin my exposition with an example so that from it I can explain my theoretical considerations in a plastic way. If a child wants to swing, he searches for the possibilities of doing so in his environment or, once there are conditions for him to do so, he himself comes up with possibilities for that. Let us suppose the child finds a swing: he will probably seat on the swing and will try to gain momentum with his own movement, increase the momentum and keep moving.

From the perspective of movement teaching based on the theory of perception, people are understood as “active beings” that produce “information” about their learning process and interpret their environment motivated by interests. In our example, the child seeks for opportunities of swinging on the constellations of the environment. In the “quest for information”, swinging is understood as such an opportunity of movement, because the child already has schemes of action correspondent to swinging. This means, first of all, two things: 1. constellations of the environment are perceived as opportunities of action to the extent of our possibilities of action; 2. the existing schemes of action span our perception.

The next question is about how such schemes of action are formed. The moment the child seats on the swing, he starts a process of articulation between him and the swing through the movement, aiming to reach a constant and rhythmic swinging. The child, for instance, bends backwards and stretches his legs forward. In the same moment, the swing swings forward resisting the pressure made by the child, but then the child follows the swing and turns, with the chest forward. As a result of the movements of the child and of the swing, there is a continuous dialogue, a talk in motion between the child and the apparatus that finally leads him to a constant swinging, or interrupted because it is not possible to reach such state yet.

From the perspective of the theory of perception, it is evident in this example that the meaning of movement, that this reality the environment has, can only arise from the relationship between the child and the thing, between the subject and the object. Gordijn calls this mutual constitution of meaning in moving “dialogue between man and world” (Tamboer, 1979); regarding moving, this relationship is also a theme in Trebels (1990).

The capacity a swing has of swinging is not a swing’s quality nor the result of the attribution of senses by the child, but rather the result of a dialogue through movement. The child, when swinging, somehow interrogates the swing in and through the movement and receives an answer to his action through the swing’s reaction. At the same time, the question already implies an act of constitution of meaning, because the capacity of swinging emerges from the movements that, in turn, are directed to the swing in an interrogative way. **And, vice versa, the characteristics of the swinging, released by the movements, attribute to the movements themselves the meaning of swinging.** “Therefore, the meanings of the object of movement and of the movement are mutually constituted in an indissoluble process. This process delineates the movement, the things, the people and the situation,

which are all shaped in their entirety and in their particularities” (SCHERER, 2001, p. 11). In these processes of confrontation with situations, “a world of motor meaning” arises (TAMBOER, 1979, p. 15). So that the swinging may be harmoniously performed, the child has to be sensitive to the movement of the swing and his own. He has to feel the exact movement in which the swing reaches the reversion point, so that, at the same time, in a sensitive way, he exerts pressure over the swing, to reach a harmonious swinging and, thus, the pleasure of movement a child associates with swinging. Landau (2004; 2005, p. 316) also describe in a very plastic way how the swinging is being explored through feeling and performing (TREBELS, 1990), until coming to a rhythmic swinging:

On the swing, I can oscillate only if I am able to find out (feel) how I can use my physical weight (perceived on the seat of the swing), in such a way that I can scent on the tension of the cords and on the seat the subtle oscillation (the “the triggered forces”) and reinforce the driving forces through the active momentum of my body in the right time. The more intensely I apprehend the mechanically determined regularity of the pendulum formed by myself, the better I can control the momentum of the swing, by following such regularity.

In this imagination, the perception and the act of moving form a functional unit. The way somebody moves conditions what such person perceives, and vice versa (BUYTENDIJK; CHRISTIAN, 1963; LEIST 1993, p. 282-288). The child described in the example learns through the linking of this movement to the respective situations of the act of swinging and its effects; he feels regularities in the movement and in the consequences, he differentiates, with his intention, well and less successful movements and develops, thereby, models of movement. “These models obtained by means of experience during the process of the (subjective) objectification are represented as movement and are purposefully available. As schematically compressed means of acting, they can serve, thus, for the quest for new situations and tasks, for a more assimilated conquer of the world, and then differentiate and accommodate themselves as schemes of action, and open new cycles of experience” (SCHERER, 2001, p. 12). Fungible schemes of action, which Piaget exposed in detail in his theory of assimilation and accommodation, appear then in cycles of experimental learning. Returning once more to the instrumental function of moving, this means that “improvements in the quality of execution and coordination of actions of movement also require, on the contrary, more accurate differentiations of perception; in the same way, children are equipped with more accurate information to control their movements when they can have a differentiated perception (FUNKE-WIENEKE, 2004, p. 221).

THE RELATIONSHIP BETWEEN PERCEPTION AND MOVEMENT IN THE DEVELOPMENT OF THE SYMBOLIC FUNCTION OF MOVING

As has been previously explained, the symbolic function of moving consists of the formation of movement as an organ of intuition, expression and configuration. The development of the symbolic function is, above all, an object of the esthetic education of movement. For this reason, the esthetic education of the movement also provides some fundamental explanations that are intimately linked to the theories already exposed.

The guideline idea of the esthetic education is the “enhancement of sensitive knowledge” (SCHMITT, 1987, p. VIII). Sensitive knowledge is not a passive process, on the contrary, it is based on an active, attenuating confrontation of the person with the world, which Fritsch (1989, p.11) also calls “esthetic behavior”. The esthetic behavior is a basic form of presenting the world symbolically. He presents:

- in the “aesthesia”, in the sensitive reflexive perception that provokes in us feelings and assumes a character of recognition; and
- in the “poiesis”, in the capacity of giving expression to feelings, and living subjective experiences through configuration (FRITSCH, 1989; HILDEBRANDT-STRAMANN; PROBST, 2006).

Sensitive-reflexive perception, in relation to the esthetic learning processes through the body and the movement, is understood as the capacity one has to feel himself when moving and stopping, and to be aware of that; it is, therefore, dealing with feelings of perception in a reflexive way.

This explanation clarifies two things: first, which the movement is a central means for the activation of the senses; and second, that movement and perception interact with each other. “The tasks of the movement education are, then, to find elementary forms in which sensitive activities are set into motion, are started, and in which children have the chance of being productive. Only in this interaction of moving and perceiving the exploring and inquisitive attitude of the child emerges, his sensitive activity is required and developed according to his bodily possibilities” (BANNMULLER, 1990, p. 142).

Poiesis comprehends the expressive sphere of the esthetic attitude; the capacity of a person to express, to form and to configure, that is, to act esthetically. Thus, any sensation of perception, music, images, feelings, experiences, etc., can be a reason for configuration.

In fact, it is about the development of esthetic attitude of interaction of the aesthesis and the poiesis, therefore, of the receptive and configuring attitude. Such interaction appears when, during the dance, the dancer follows a rhythm, let it penetrate him, follow him, let it lead and move him. The same is valid if we let ourselves be led into the dynamics of a song until it becomes the dynamics of the movement itself, if we apprehend images, poems, impressions, routine movements, constellations of relationship in their essence and seek for an expression of movement for that (BECKER; FRITSCH, 1998, p. 95).

Such procedures are not only ruled by the imitation of existing forms or techniques. They presuppose an “*adaptação interno-corporal ao de frente, a song, a text, an image, a certain material*” (BECKER; FRITSCH, 1998, p. 95). For animals, pictures, functions, fairy tales, stories of everyday life to be represented they need to have their qualities perceived and to be given a shape. “The esthetic attitude manifests, therefore, in actions of transformation, transport-se num de frente e dar ao de frente uma linguagem no próprio movimentar-se” (BECKER; FRITSCH, 1998, p. 95).

THEMES FOR THE DEVELOPMENT OF THE FUNCTIONS OF THE MOVEMENT

Bannmuller admirably presented, in 1987, themes whose conduction may lead to a differentiated development of the functions of movement herein discussed. It is about the themes exposed “The development of the instrumental function – first example”, “Instrumental development – second example”, “The development of the sensitive function”, “The development of the social function” and the “The development of the symbolic function” – to which I attribute the respective functions.

1. In the *development of the instrumental function – first example* – the theme is: “The child in the confrontation in motion with materials, apparatuses and objects”. Along with traditional apparatuses, such as balls, cords, arcs, sticks, or gymnastics apparatuses, like boxes, cords and bars, there are also materials of the daily life to explore through movement. They provoke basic actions of movement, such as throwing, running, jumping, swinging, oscillating and climbing. Besides, they lead children to configure and construct situations of movement autonomously. A known example of that is the

movement office (“Bewegungsbaustelle”) (MIEDZINSKI, 1986; MIEDZINSKI; FISCHER, 2006). In the movement office children can:

- try apparatuses and materials through movement;
- build and change their situations of movement actively and autonomously;
- create and assemble simple movement apparatuses and materials.

In this context, the practical learning of movements means that, along time, children acquire experience and knowledge with the materials, which allows them constantly creating situations of movement. Thus, they learn not only to move with greater safety, but also to develop a practical sense for the appropriate use and, consequently, the safe use of the materials. Landau and Miedzinski (1984, p. 337) make the following consideration: “In this way, the comprehensive learning involving body and mind can be carried out through creation and movement. Not only the capacity itself is experimented, but also, through a dialogue of movement, the characteristics of the objects, the simple regularities, such as lever, weight, balance, elasticity and others similar”.

2. In the development of the instrumental function – second example – the theme is: “The child in the confrontation in motion with the space, and the interaction of the senses (hearing, seeing, touching)”. Bodily experiences are always linked to spatial experiences. At the same time the possibilities of movement of the space are explored, the space is configured through the movement. The purpose of this exploration of the space and of the movement is to discover the possibilities of movement contained in the space, to orientate oneself in the space and to learn to configure it. Bannmuller, for example, mentions dance as a possibility of movement to transmit spatial experiences. Along with sounds and noises, it is possible to develop the spatial orientation through hearing or, with the help of “symbolic letters” (Symbolkarten), to recognize and configure spaces.
3. In the development of the sensitive function, the theme is: “The child in the confrontation in motion with himself and his body”. This theme is about, above all, fundamental bodily experiences in the moving context. To this belong the aware perception of the different reactions of the body to loads, tensions and relaxation, to the contact with different floors when walking, to the struggle against the gravitational force when swinging, etc. This interaction of the senses becomes clear in the “stilt walk” example by Rittelmeyer (2002, p. 56): “The way, for example, the function of the gravitational laws of the everyday life becomes accessible to a child walking on stilts, is intimately linked to the simultaneous activation (or synesthesia), at least, of the visual sense, of balance and of the self-movement. These/This??? senses, in their spatial interaction, enables the perception of the physical world as spatial, determined by gravitational forces”.
4. In the development of the social function, the theme is: “The child in confrontation with the social world. When children move they often do so with the intention of moving with other children, that is, to establish relationships with others by moving. Many simple toys, construction activities in group, but also fighting and quarreling, are examples in which children establish relationships through movement. Sherborne (1998) highlights the special meaning of the relationship through the movement for the development of children. She classifies the relations of movement into three types: “caring” designates the “caring relationship for one another”, “shared” designates the relationship “with one another”, and “against” designates “one against the other”. Caring is expressed in holding and supporting, in the reciprocity and in the balance movement mutually enabled, in which the against is expressed in the pressing and pushing.

5. In the development of the symbolic function, the theme is: "The child in the confrontation in motion with cultural objectifications". Cultural objectifications refer to pieces of art produced by human beings in the area of music, painting, sculpture, poetry and dance. Children have access to such works through the process of moving interpretation. A method of such interpretation is the representation act or also the scene (HILDEBRANDT-STRAMANN, 2003). Thereby, children learn to identify themselves with characters, to play roles and interpret them, to configure images, to reconstruct the basic structure of musical piece through movement or exteriorize its effect through movement. To this set of theme belong the production of cultural objectifications too. Children often move also aiming to communicate something or to comprehend something better by imitating. Each type of representation of dance, pantomime and staging has a symbolic representation, just as the everyday adequacy of the posture itself, which must correspond to social expectations.

At this point, it can be summarized that moving means for the growing human being a singular and irreplaceable form of knowledge of the world. By moving, he recognizes and explores the meanings of movement of the world. "Thus", Funke-Wieneke (2004, p. 243) "an emancipation thought is interwoven. The formation of movement sets a person free from the timid being inside a voluminous and unskilled body, and from the restriction of an insufficient world, *oculto à vontade and se reduzindo à fantasmas irreais*". Besides, Rittelmeyer (2002, p. 56) emphasizes this emancipation thought when identifying the act of standing up and walking "as articulation of impulses of the will against the tendencies of the gravitational and centrifugal forces that "pull down" and constantly threat the unstable balance state of the biped. However, who counterbalances his body considering the gravitational tendencies in such a way that he can impose himself against these heteronomous tendencies, daily and unconsciously creates an autonomous experience. Would speaking of "freedom" reasonably be possible without having created this elementary bodily experience?

MOVING AND RECOGNIZING

An epistemological justification for my theme that, so far, has been addressed mainly from an anthropological angle, I find in the phenomenological considerations of the body by Merleau-Ponty (1966). From the phenomenological point-of-view, through the movement the human being-world unit is brought about, and, as Merleau-Ponty writes, the corporeality designates the manner of our being-in-the-world. "This pre-reflexive dimension of acting and of the human understanding " (Meyer-Drawe, 1988) cannot be excluded from the process of recognition. This means that the sensitive experience, the interpretation of the senses, the appreciation and the action form a functional context that only later can be interpreted in a cognitive way. This pre-reflexive dimension of human understanding and acting equally appears in the phenomenological concept of "body". Merleau-Ponty (1966) designates with that a "life of non-reflected awareness", a "natural subject", who experiments things through acting and, at the same time, transcends them to a perspective. Helbig (1991, p. 10) attributes to this area of pre-scientific experiences a dignity of proper sense "that, in spite of the provisional character, fits also the childish interpretations of the world, since in them experiences that have already perceived by adults can be presented.

To conclude I would like to say that my considerations are influenced by the pedagogical conscience of establishing movement and corporeality as characteristics of a preschool education that follows the growth of children in the modern world, pedagogically and

didactically justified. The effort of all those in charge of the educational processes in preschool education must be toward leaving children “confident in relation to their sense” as much as possible”. According to Wagenschein (1992), “to be confident with his senses” means that the subject can detach himself a little bit from the power objects of the external reality have on him

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