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Social and cognitive aspects of children's play

1. The importance of children's play

Play is extremely important in the process of development of child. It helps children to gain mastery over their bodies, to acquire new skills and to learn when and how use them. Active play is so central to child development that it should be included in the very definition of childhood¹. Play offers more than cherished memories of childhood, it allows children to develop creativity and imagination while developing physical, cognitive, and emotional strengths.² Play enhances physical health by building active, healthy bodies. Through play, child grows, learning how to use muscles, to co-ordinate perception and movement. Physical activity beginning in early childhood prevents obesity³. In fact, play may be an exceptional way to increase physical activity levels in children and, therefore, may be included as an important strategy in addressing the obesity epidemic⁴.

- 1 Milteer R.M. , Ginsburg K.R., Mulligan, D.A., The Importance of Play in Promoting Healthy Child Development and Maintaining Strong Parent-Child Bond: Focus on Children in Poverty Pediatrics, 2012.
- 2 Frost JL, Norquist T. The importance of play. Association Guest Column: International Playground Equipment Manufacturers Association (IPEMA). *Recreation Management Magazine*. 2007.
- 3 Campbell KJ, Hesketh KD . Strategies which aim to positively impact on weight, physical activity, diet and sedentary behaviours in children from zero to five years. A systematic review of the literature
- 4 Cleland V, Venn A. Encouraging physical activity and discouraging sedentary behavior in children and adolescents. *J Adolesc Health*. 2010;47(3):221–222

Play also contributes to healthy brain development⁵. Children engage and interact with the world around them through play from a very early age. Even in the academic environment, play helps children adjust to the school setting, thereby fostering school engagement, and enhances children's learning readiness, learning behaviors, and problem-solving skills⁶. In addition, play and recess may increase children's capacity to store new information, as their cognitive capacity is enhanced when they are offered a drastic change in activity⁷. Play is also essential to developing social and emotional ties. Firstly, play helps to build bonds within the family. Children's healthy development is mediated by appropriate nurturing relationships with consistent caregivers⁸. Play allows for a different quality of interaction between parent and child, one that allows parents to "listen" in a very different, but productive, way. When parents observe their children playing or join them in child-driven play, they can view the world through their child's eyes and, therefore, may learn to communicate or offer guidance more effectively. Less-verbal children may be able to express themselves, including their frustrations, through play, allowing their parents an opportunity to better understand their needs. Above all, the intensive engagement and relaxed interactions that occur while playing tell children that their parents are fully paying attention to them and, thereby, contribute to a strong connection⁹.

Secondly, play also helps forge connections between children. It allows them to learn how to share, to negotiate and resolve conflicts, and to learn self-advocacy skills when necessary¹⁰. It teaches them group leadership as well as other group skills that may be useful in adult life. Therefore children's play should be an integral component of school curriculum. School engagement is best realized when the educational setting attends to the social and emotional development of children as well as their cognitive development¹¹. The challenge is to make each child

5 Chudacoff H. *Children at Play: An American History*. New York, NY: NYU Press; 2007

6 Fisher EP. The impact of play on development: a meta-analysis. *Play and Culture*. 1992;5:159–181

7 Coolahan K, Fantuzzo J, Mendez J, McDermott P. Interactive peer play and readiness to learn: relationships between play competencies and classroom learning behaviors and conduct. *J Educ Psychol*. 2000;29:141–152

8 Shonkoff JP, Phillips DA, Institute of Medicine, Committee on Integrating the Science of Early Childhood Development, Board on Children, Youth and Families. In: Shonkoff JP, Phillips DA, eds. *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Washington, DC: National Academies Press; 2000

9 Tamis-LeMonda CS, Shannon JD, Cabrera NJ, Lamb M. Fathers and mothers at play with their 2- and 3-year-olds: contributions to language and cognitive development. *Child Dev*. 2004;75(6):1806–1820

10 McElwain NL, Volling BL. Preschool children's interactions with friends and older siblings: relationship specificity and joint contributions to problem behavior. *J Fam Psychol*. 2005;19(4):486–496

11 Milteer R.M., Ginsburg K.R., Mulligan, D.A., *The Importance of Play in Promoting Healthy Child*

feel competent in a school setting, because the experience of success forms positive associations with school attendance¹². Each child should have the chances to demonstrate academic strengths, opportunities to exhibit social, physical, and creative strengths that allow them to realize their areas of strength in the future. Play foster creative aptitude and physical fitness that enable peer interactions that contribute both to school engagement and social-emotional learning. Social-emotional learning should not be thought of as distinct from academic learning, because it can creatively be integrated with academic learning and has been shown to enhance children's ability to learn¹³.

Play is so important in children's lives that they do not completely differentiate reality from fantasy. Developmental psychologists look at children's play in two ways: as a social activity and as a cognitive training¹⁴. Practically each play has social and cognitive aspect: even alone child plays some role and exercises some abilities which could be probably useful in the social life. However, we can distinguish social play - when child interacts clearly with other children, and cognitive play - when child is concerned mostly on solving cognitive problem. Social play enhance child's social competence and interpersonal skills, cognitive play enhance child's cognitive development. In both cases the children play develops from the very simple forms towards rich and sophisticated forms.

Some researchers have developed more the concept of social play, for instance Parten¹⁵, while others like Piaget and Smilansky¹⁶ have been more interested in research on cognitive play. Mildred B. Parten observed thirty-four 2- to 5-year-olds children during free play periods in kindergarten. She distinguished six types of play and notice, that some of them are less mature and advanced than others.

Also similar study by Barnes¹⁷ showed clearly that younger children play differently than older. Therefore we can interpret this types of play as stages, beginning with the simplest type of play until the most sophisticated. However, it does not mean, that older child do not play

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12 Miller E, Almon J. Crisis in the Kindergarten: Why Children Need to Play in School, College Park, MD: Alliance for Childhood; 2009

13 McElwain NL, Volling BL. Preschool children's interactions with friends and older siblings: relationship specificity and joint contributions to problem behavior. *J Fam Psychol*. 2005;19(4):486-496

14 Elias MJ, Arnold H. The Educators Guide to Emotional Intelligence and Academic Achievement: Social-Emotional Learning in the Classroom. Thousand Oaks, CA: Corwin Press; 2006

15 Parten, M., Social play among pre-school children. *Journal of abnormal and social psychology*, 27, 1932.

16 Smilansky, S., The effects of sociodramatic play on disadvantaged pre-school children. New York: Wiley, 1968.

17 Barnes, K., Preschool play norms, *Developmental Psychology*, 5 (1), p. 98-108.

sometimes as young. Social play is more advanced than non-social play, thus Parten and other scientists suggested that children who play only by themselves may be at risk for a number of mental health and educational problems. On the other hand a considerable amount of non-social play consists of constructive or educational activities and contributes to a child's cognitive, physical and social development.

2. The stage model of children's play

Stage development in cognitive - developmental psychology represents hierarchical order: the structured from lower stages are organised by structured of higher stages, child who is in stage six can reveal behaviour superficially similar to the stage one (for instance non-social play) but it will be qualitatively different. In other words child can reveal also lower types of behaviour (from lower stages), but cannot do things from the higher stages. Piaget¹⁸ claimed, that there is an orderly and logical pattern in the development of the child play, based on the sequential changes associated with intellectual growth, especially the stages that are characterised by the emergence of logical thought. Also Lawrence Kohlberg¹⁹ found the existence of certain stages in the development of children's moral judgement. Both Piagetian stages of cognitive development and Kohlbergian stages of moral development fulfil demanding criteria for hard stages²⁰:

1. Stages imply distinct or qualitative differences in modes of thinking or of solving the same problem at a different level.

2. These different modes of thought form an invariant sequence in individual development - while cultural factors may speed up, slow down, or stop development, they do not change its sequence.

3. Each of these different and sequential modes of thinking forms a «structured whole» representing an underlying thought organisation.

4. Stages are hierarchical integrations forming an order of increasingly differentiated and integrated structures to fulfil a common function and reintegrate the structures found at lower levels.

Thus, play, as any various forms of knowledge, abilities, strategies, etc. defines membership in a Piagetian type stage: (1) represent genuine qualitative novelties, but may also be causal-developmentally linked with other, more quantitative-looking sorts of changes (2) may evolve

18 Piaget, J. (1932). *The moral judgement of the child*. New York: Harcourt, Brace and World.

19 Kohlberg, L. (1976). *Moral stages and moralisation: the cognitive-developmental approach*. W: Lickona (red.) *Moral development and behavior*. New York.

20 Piaget, J. (1952). *The origins of intelligence in children*. New York: International Universities Press.

towards their full functional maturity much more slowly and gradually than is commonly supposed, often achieving it only well after that stage's conventional closing date (3) need not (theoretically) and often do not (empirically) evolve in strict developmental synchrony or concurrence, one with another (4) typically become functionally interlocked to form networks of cognitive structures, once sufficiently mature²¹.

3. Stages of social play

The autor propose to distinguish same stages of social play of the children, in the invariant sequences, following hierarchical order: the structured from lower stages are organised by structured of higher stages.

Stage 1.

Unoccupied behaviour:

The child is in fact not playing but rather occupies him or herself with observing anything that happens to be of momentary interest. Where there is nothing interesting outside he or he plays with his or her own body or with some thing found around.

Stage 2.

Onlooker behaviour:

The child spends most of his time watching the other children play (rather than observing anything, that happens to be exiting), often talking to them, asking questions without entering the play.

Stage 3.

Solitary independent play:

The child plays alone and independently with toys that are different from those used by the children within speaking distance and makes no effort to get close to other children. He pursues his own activity without reference to what others are doing.

Stage 4.

Parallel play

The child plays independently, but the activity he chooses naturally brings him among the other children. He plays with toys that are like those which the children around him are using, but he plays with the toy as he sees fit, and does not try to influence or modify the activity of the children near him. He plays beside rather with the other children

Stage 5.

Co-operative play

The child plays with other children. The conversations concerns the common activity, all the members engage in similar if not identical

21 Flavell, J.H., Stage-related properties of cognitive development, Cognitive Psychology, Volume 2, Issue 4, October 1971, Pages 421-453.

activity, there is no division of labour and no organisation of the activity. The children do not subordinate their individual interest to that of the group, instead each child act as he or she wishes.

Stage 6.

Organised play

The child plays in a group that is organised for the purpose of making some product, of striving to attain some competitive goal, of dramatising situation of adult and group life or of playing formal games.

4. Stages of cognitive play

Play is extremely important in cognitive development of child. Many authors e.g. E.J Hrnčir²², J.A. Chafel²³ present the import role of play in cognitive development. A comprehensive model of cognitive play was proposed by Piaget²⁴ (1951) and Smilansky²⁵. It represents also different types of play, from which some are most basic (lower stages) and more advanced (higher stages).

Stage 1. Sensorimotor play

Any simple repetitive muscle movement with or without objects, such as rolling a ball or pulling a toy.

Stage 2. Constructive play

Manipulation of objects to construct or to create something

Stage 3. Dramatic play

Substitution of any imaginary situation to satisfy the child's personal wishes and needs. Pretending to be someone or something (doctor, nurse, fireman), beginning with simple activities but going on to develop more elaborate plots

Stage 4.

Games with rules.

Any activity with rules, structure and a goal (such as winning). Acceptance of prearranged rules and adjustment to them.

Of course there is only one play of a child, which has both social and cognitive aspect. Each play has own cognitive aspect, even very socially engaged. Also each more advance play has some social aspect, even when child plays alone. About 15 to 30 percent of children between the ages 3 and 10 create imaginary companions, whom they talk and play with.

22 Hrnčir E.J.(1989). Children's play: The dynamic and spontaneous expression of the interface of emotion and cognition. "Child and Youth Care Quarterly" 18.

23 Chafel J. A.(1991). The play of children: Developmental Processes and policy implications, Child and Youth Care Forum, 20.

24 Piaget, J. (1951). *Play, Dreams and Imitation in Childhood*. London: Routledge and Kegan Paul Ltd.

25 Smilansky, S., *The effects of sociodramatic play on disadvantaged pre-school children*. New York: Wiley, 1968.

Playing alone, child also very often imagine social situation, like being a king, knight or nurse. Play with toys possesses social character very often as well.

Therefore I tried to propose for basic stages of development of play, which contain both social and cognitive aspects.

General stages of children's play:

Stage 1. Functional play.

Play is an individual training in order to enhance motor and perceptive development.

Here we have stage 1 and 2 of social play (unoccupied and onlooker behaviour) and stage 1 of cognitive play (sensorimotor play). Cognitively this stage responds to sensorimotor period in Piaget's theory of cognitive development²⁶.

Stage 2. Intuitive play

Child play in order to discover or create something. For the beginning child plays individually but eventually he or she find a source of inspiration in another children's activities.

Here we have stages 3 and 4 of social play (solitary independent and parallel play) and stage 2 of cognitive play (constructive play).

Cognitively this stage responds to intuitive period in Piaget's theory of cognitive development.

Stage 3. Structural play

Child starts to prepare him or herself to social life of adults. In order to dramatise situations from real adult life co-operation of children is necessary, but they do not use strict rules.

Here we have stage 5 of social play: co-operative play and stage 3 of cognitive play: dramatic play. Cognitively this stage respond to concrete - operation period in Piaget's theory of cognitive development.

Stage 4. Formal play

Play is already fully and logically structuralized by logic and social rules. Here we have stage 6 of social play: organised play and stage 4 of cognitive play: game with rules.

Cognitively this stage respond to formal - operation period in Piaget's theory of cognitive development²⁷.

However, we can distinguish two sub periods:

4a. heteronomous play

In this period children accept only rules given by others - by older children or by adults and they are not willing to create new rules or

26 Piaget, J. (1952). The origins of intelligence in children. New York: International Universities Press.

27 Piaget, J. (1952). The origins of intelligence in children. New York: International Universities Press.

modify them.

4b. autonomous play

In this period children can create and negotiate new rules or modify old, depending on situation. It does not mean, that they will change all the rules, for instance rules of playing chess, but even here they can be much more creative and inventive, following the basic rules.

Through play, child learns how to understand another person's view, develops skills in solving social problems, and becomes cognitively creative in a number of ways. There is strong mutual interrelation between social and cognitive aspect of play. Cognitive competence enhance social skills, social competence enhance cognitive skills. Rubin, Maioni and Hornung in their 1976 study found more parallel play among children from lower socio-economic strata and more co-operative play among middle -class children. Certainly better education enhance more social

Table 1.

Stages of social development Selman (1980)	Stages of cognitive development Piaget (1952)	Stages of social play	Stages of cognitive play	General stages of children's play
egocentric role-taking	sensomotor intelligence	unoccupied behaviour	sensomotor play	functional play
social-informational role-taking	intuitive intelligence	onlooker behaviour: _____ solitary independent play: _____ parallel play	constructive play	intuitive play
Selfreflective role - taking	concrete intelligence	co-operative play	dramatic play	structural play
Mutual role-taking	pre-formal intelligence	organised play	play with rules	formal play 4a. heteronomous play
social and conventional system role - taking	formal intelligence	organised play	play with rules	formal play 4b. autonomous play

playing, cultural factors here are also very important. On the other hand, through social play child can find a lot of very important experience, which is very beneficial in cognitive domain.

In conclusion, we can say, that play is very important both for social and cognitive development of child and that this two aspects are strongly interrelated. Practically, we cannot differentiate totally social play from cognitive play. Therefore, I tried to show a general mode of development of children's play, which holds these two aspects together.

Finally, I present a table, which summarise the stages of children's play and compares them with stages of social and intellectual development.

Conclusions.

It is obvious, from scientific point of view, that all children have the right to play regularly, and they should play, because this allow them to develop cognitive, communication, problem-solving, negotiation, and leadership skills. They have the right to engage in safe and regular physical activity that will decrease the incidence of lifelong health disparities. The physically and emotionally healthy children of today will become the productive citizens who will contribute positively to society in the future. However, play is also a fascinating scientific issue, which could be observed and described in scientific way. In this article children play was described within the stage model, which follow each rule of Piagetian cognitive and behavioral development.

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Abstracts

ANDRZEY MIRSKI. Społeczne i poznawcze aspekty zabaw dla dzieci. Artykuł poświęcony jest przeglądu i analizie aspektów społecznych i poznawczych gry dla dzieci; przeanalizowano naturę gry z pozycji psychologii i innych nauk społecznych; przedstawiono analizę klasycznych i nowoczesnych źródeł oraz badań dotyczących natury zabaw dla dzieci. Zaproponowano strukturalno-dynamiczny model gry dla dzieci jako składowej zachowania społecznego, a także jako ważnego elementu rozwoju poznawczego.

Słowa kluczowe: zabawa, gry dla dzieci, aspekty społeczne gry, rozwój poznawczy, aspekty poznawcze gry, strukturalnego-dynamiczny model gry.

АНДЖЕЙ МИРСКИ. Соціальні та когнітивні аспекти дитячої гри. Стаття присвячена огляду та аналізу соціальний і когнітивних аспектів дитячої гри. Досліджено природу гри з позиції психології та інших соціальних наук. Представлено аналіз класичних та новітніх джерел і досліджень природи дитячої гри. Запропоновано структурно-динамічні моделі дитячої гри як складової соціальної поведінки, а також – як важливого інструменту когнітивного розвитку.

Ключові слова: гра, дитяча гра, соціальні аспекти гри, когнітивний розвиток, когнітивні аспекти гри структурно-динамічна модель гри.

АНДЖЕЙ МИРСКИ. Социальные и когнитивные аспекты детской игры. Статья посвящена обзору и анализу социальной и когнитивных аспектов детской игры. Исследована природа игры с позиции психологии и других социальных наук. Представлен анализ классических и новейших источников и исследований природы детской игры. Предложены структурно-динамические модели детской игры как составляющей социального поведения, а также - как важного инструмента когнитивного развития.

Ключевые слова: игра, детская игра, социальные аспекты игры, когнитивное развитие, когнитивные аспекты игры структурно-динамическая модель игры.

ANDRZEJ MIRSKI. **Social and cognitive aspects of children's play.** *The article provides an overview and analysis of social and cognitive aspects of children's games. The nature of the game with the positions of psychology and other social sciences. Predstaveno analysis of classical and modern sources and research on the nature of children's play. A structural dynamic model of children's games as part of social behavior, and - as an important tool of cognitive development.*

Key words: *game, children's game playing and social aspects, cognitive development, cognitive aspects of the game structural dynamic model of the game.*