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REPRESENTATION OF THE ECONOMIC WORLD IN POLISH PRESCHOOL CHILDREN

The changing economic system in Poland constitutes a new context for the development of representations in Polish children. The representation of several economic objects, events, and institutions in the action, perception, and concepts of children aged 6-7 were investigated during conversation with adults and peers.

Theoretical background

I. The general theoretical background is related to several cognitive concepts which can be adopted to explain the development of children's economic representations and behavior:

- cognitive constructivism (Piaget, 1955);
- social constructivism (Vygotsky, 1978, 1986);
- cognitive interactionism (Bruner, 1981; Snow, 1972);
- cognitive socialisation (Burriss, 1981; Jahoda, 1984);
- local constructivism (Harris & Heelas, 1979);
- social economic representation (Vérges, 1984, 1991).

II. We assume that layers of representation of the economic world:

- enactive,
- perceptual,
- imaginative (iconic),
- conceptual (symbolic)

develop in the preschool years in parallel or hierarchically.

The three first layers are parallel because preschool children:

- select in action perceptual stimuli,
- transform their immediate experience in play activity,
- reproduce economic objects and events or create a fantasy economic world in their imagination (e.g., drawings, fairy tales).

The fourth layer (conceptual representation) forms a superstructure built on the previous ones. This is a network of pseudo-concepts, or everyday life economic concepts, which constitute children's current cryptic knowledge about economy.

We also assume that the communicative function of language enables the acquisition of all layers of economic representation. The linguistic exchange of simple economic experiences form the basis for developing more complex notions and problems in this area.

Problems

From a rich and complex economic domain the elements accessible at the preschool child's cognitive level were chosen.

Our preliminary studies dealt with the following problems:

1. Economic representation expressed in children's activity,
2. Perceptual representation of the child's family economic situation,
3. How children imagine certain economic problems in their country?
4. Representation of economic events and processes,
5. Children's knowledge about jobs, professions and salaries,
6. Content and extent of children's vocabulary related to everyday economic concepts,
7. Children's comprehension of socio-economic inequalities.

Some research results concerning problems 1, 2, 3, and 6 are presented here.

Method

The paper presents the preliminary results of a series of pilot studies carried out in order to determine whether the procedures used were appropriate to the investigated problems. The procedures employed included: observation of pre-arranged pretend play ("shopping" — Problem 1), semi-structured interview (Problems 1, 2, 3, 6), drawing (Problem 2), and word associations (Problem 6).

The children, 6-7 years old, comprised samples of 20 - 90 subjects in Poland. In Problem 2 a small group of subjects in Slovakia was also studied in order to check whether the procedure can be used in various socio-cultural settings.

Results

Economic representation expressed in children's activity

The preschool child reflects economic world in action:

a/ as a participant in the economic life of the household, in interaction with parents and relatives. His/her experience depends on the degree of accessibility of economic events at the child's activity and cognitive level;

b/ in pretend play (e.g., shopping, baking cookies or bread, playing doctor). Observations of shopping play of 90 children showed alternate role play of shopkeepers and customers, and organisation of scenes in series which referred to their own experiences.

The structure of the play was script-like, with scenarios complex enough to include the transfer of goods from storehouse to shop and to customer.

Comprehension of the economic terms used by children in their play was checked in conversation with the child. The number and frequency indices of these terms are shown in Table 1. For fragments of play records see Appendix 1.

Perceptual representation of the child's family economic situation

Perception and orientation in the economic situation of the child's family were investigated prior to Christmas. The children were asked about gifts they wanted to get, about

Table 1. Economic terms in shopping pretend play of children

Terms	Number of words	Index of frequency
buy	215	2.38
money	127	1.41
sell	89	0.98
pay	78	0.86
price	69	0.76
change	51	0.56
goods	46	0.51
expensive	43	0.47
cheap	14	0.15

the prices of gifts (cheap or expensive), and the possibility of receiving these presents from their parents. Children also planned presents for family members, as well as objects and goods needed in the household. They talked about ways of spending their holidays. Subjects from Poland (20) and Slovakia (12) also made drawings of imagined gifts.

In general, the children differentiated their wishes according to the actual situation of their parents. They estimated the economic status of their families as average (in Poland) or low (in Slovakia). They understood the relation between parental jobs and salaries. The needs of the mother and of the father are quite well known. For siblings, the children planned similar gifts as for themselves, and adapted them to the age of brother and sister.

For the household and the entire family, various goods were planned from common and cheap objects (tools, utensils) to very expensive ones (car, new furniture).

Fragments of interview records are contained in Appendix 2.

How children imagine certain economic problems in their country?

In the first stage of research we were interested in how children imagine the schema of king and president as organisers of the state economy, and how it is done so that everyone should be wealthy, satisfied and happy. The children were asked to identify themselves with such a person and to tell what should be done, and how, in order to reach this goal.

The notion of king was on the fictitious plane, that of president on the reality plane, situated in the context of "here and now". The subjects (20 children) functioned more easily on the fictitious plane, because they could reproduce elements from familiar tales. Children also used some elements of "fictitious economy" as tools for action by the president (e.g., treasures, distribution of money and goods, especially among poor people).

Children of unemployed parents projected concrete help: one boy (6;7) as president wanted to buy "a bed for the baby and couches for grandmother and grandfather", another boy (6;5) wanted to give his parents money for bread and cheese.

Children's drawings presented figures of king and president, with accessories of wealth

and sometimes with a guard of treasures. The president's figure often resembled Wałęsa, the present¹ Polish president, with a large moustache, together with his wife, although the instruction stressed the imaginative character of a president and his country. Fragments of interview records are included in Appendix 3.

This research is to be continued in several variants and with various age groups.

Content and extent of children's vocabulary related to everyday economic concepts

Using word associations combined with interviews the content and extent of the children's economic vocabulary were investigated (30-60 children). The words referred to monetary concepts, economic institutions and behavior. Categories of word associations with three terms: money, shop and bank, are listed in Tables 2, 3 and 4, with examples and numbers of associations per category.

We can compare our results with those of numerous adult samples (men and women) from France. Vérges (1991) distinguished the following categories of associations with money: 1/ work - salary, 2/ means of life, 3/ money and things (goods, services), 4/ family and its budget, 5/ agents of the economy (state, institutions, taxes), 6/ substance of money, 7/ moral aspects, 8/ political aspects (power). In contrast, our children's associations formed only a few categories. These were in a developed form, the third French category (what we

Table 2. Categories associated with the word *money*

	Name of category	Examples	Number of associations
1.	Concrete attributes	(made) of paper or metal; round, rectangular, have pictures	35
2.	Abstract attributes	are useful, have a value	2
3.	Kinds of money	zlotys, dollars, marks, new "Kopernik" (name of a particular coin)	10
4.	Provenance of money	somebody created it, they came from the post office, machines made money	17
5.	Money storage	bank, pocketbook, bag	3
6.	Non-specific transactions	to have money, get, take, put away, lose, send	26
7.	Specific transactions	pay, sell, buy, save, spend, settle up	72
8.	Work - salary	earn, gain salary, wage	12
9.	Goods for money	house, car, bread, flour, candies, toys, doll	23
10	Emotional states	make happy, one can enjoy money	2
11	Norms of behavior	forbidden to put into the mouth, bite, tear, throw into the garbage, must be sorted	3

¹ Year of the study was during Wałęsa's term of office

Table 3. Categories associated with the word *shop*

	Name of category	Examples	Number of associations
1.	Kinds of shops	grocery, kiosk, florist warehouse, greengrocery, "Magda" (name of a particular shop)	10
2.	Goods	goods, flowers, bread, sugar, butter, ham, miscellaneous items	12
3.	Shop fittings	scales, shelves	4
4.	Staff	salesman, saleswoman	2
5.	Non-specific actions	open, close, enter, leave, paint, repair, go to a shop	22
6.	Specific actions	buy, sell, work in a shop	26
7.	Commercial transactions	money, price	3

can have for money) and sixth (kinds of money and their attributes). The first category (earn money) and the fourth (specific activities with money covering expenditures for family needs) were represented in a primitive form. Typical child categories, absent in the French adult population, were the forbidden behaviors with money and some reflections on its provenance. Fragments of interview records are to be found in Appendix 4 a.

A shop is a concrete concept which is well known to children from their own experience. The number of associations was related to area of domicile: children from small towns made purchases themselves more often than children who lived in the city. The former group of children produced more developed associations than the latter. Fragments of interview records are in Appendix 4 b.

Table 4. Categories associated with the word *bank*

	Name of category	Examples	Number of associations
1.	Description of building	desks, cashier's window, stairs, machines	11
2.	Deposit bank	money, banknotes, gold	24
3.	Non-specific actions	go to bank, work, count, guard	18
4.	Specific actions	store money, lend, exchange, pay in (for electricity, flat), save	38
5.	Improper or inadequate actions	buy, steal, sell tickets for train, drink coffee	8
6.	Security system	policeman, guard, bell	6
7.	No answer	I don't know, mother knows	7

The bank is an economic institution well known by name to Polish preschool subjects. The semantic field of this word was however quite limited. Correct word associations appeared which reflected basic bank transactions but the children also produced associations with non-specific and even inadequate (improper) actions. The children tended also to give a description of a bank building which was attractive to them. Some boys gave a priority to elements of the bank's security system; this may be connected with films about bank robberies. Fragments of interview records are in Appendix 4 c.

Conclusions

Pre-school children reflect the economic world first of all in terms of action, and they transform their immediate experience in pretend play. The general script-like economic event representation (e.g., shopping) in this field is well established.

The conceptual layer of representation develops more slowly, although 6-7-year-olds could express and associate numerous economic notions in appropriate contexts.

Our preliminary studies showed that Polish children at ages 6 to 7 had already some orientation in:

- economic exchange of goods and the role of money,
- the economic situation of the family and needs of its members,
- basic processes and institutions involved in the economic life of society.

References

- Bruner J. S. (1981). The pragmatics of acquisition. In W. Deutsch (Ed.), *The child's construction of language*. London: Academic Press.
- Burris V. (1981). *The child's conception of economic relations: A study of cognitive socialisation*. Paper presented at the Annual Meeting of the American Sociological Association, Toronto.
- Harris, P., & Heelas, P. (1979). Cognitive processes and collective representations. *Archives Européennes de Sociologie*, 20, 211-241.
- Jahoda, G. (1984). The development of thinking about socio-economic systems. In H. Tajfel (Ed.), *The social dimensions*. Cambridge: Cambridge University Press.
- Piaget, J. (1955). *The language and thought of the child*. New York: Meridian Books.
- Snow, C. (1972). Mothers' speech to children learning language. *Child Development*, 43, 549-565.
- Vérges, P. (1984). Une possible méthodologie pour l'approche des représentations économiques. *Communication - Information*, 6 (2/3), 375-396.
- Vérges, P. (1991). Społeczne pojmowanie ekonomii jako forma wiedzy. (Common social understanding of economics as a form of knowledge). *Przegląd Psychologiczny*, 34 (1), 25-43.
- Vygotsky, L.S. (1978). *Mind in society*. Cambridge: Harvard University Press.
- Vygotsky, L.S. (1986). *Thought and language*. Cambridge: M.I.T. Press.

Appendix 1

Shopping. Play 1 (fragments)

Participants: Małgosia (6;5), Jagoda (6;4), Agnieszka (6;5)

(The children put the "goods" on a table, and distribute "money").

A.: Oh, this is all money (puts the "money" on the "counter").

M.: Do it equally!

J.: Well, there must be a lot of money in a shop.

A.: But we have to have a lot too.

M.: Now everything is expensive. You have to have a lot of money to buy anything.

(J. divides the “money” and compares the piles).

A.: OK, that’s enough for us. Take this (giving some money to M.). Jagoda, you’re selling.

J.: Yes, I’ll sell, you’re buying, (to M.) you too. Come on now, buy, buy!

M.: Come on Agnieszka, let’s make a queue. [...] Are you open already?

J.: Oh, for ages! I am open before work hours.

A.: Good morning.

M.: Good morning.

J.: (to A.) Can I help you?

A.: One package of coffee, please.

J.: There you are (gives A. a box).

A. looks at the small balls, grasps them, smells, squeezes).

A.: Are these oranges fresh?

M.: Uhuhuh! I want them for my child.

J.: They’re fresh. But don’t squeeze them, Agnieszka, or you’ll make a hole in it!

A.: Two oranges, please (she hands over 2 balls). I picked some nice ones.

J.: Thank you (she weighs the balls). Two kilos, okay? Do you want any more?

A.: No, thank you. How much do I pay?

J.: Ten thousand.

A.: Here you are. But give me what I bought.

Shopping. Play 2 (fragments)

Participants: Karol (6;0), Sławek (6;3), Mateusz (6;1)

(The boys are setting up shop on a table, placing scales and goods, and distributing money. They say almost simultaneously: “Good morning!” and laugh).

S.: Some tea, please!

M.: And what tea do you have because I would like good tea.

K.: We have good teas... bad ones too.

S.: We want good ones. Can we choose?

K.: Go ahead and choose.

(S. and M. look at the tea boxes).

S.: This one for me... How much is it?

M.: (to S.) Do you know this one?

K.: Twenty-six thousand! Sławek!

S.: But it’s good.

M.: How do you know that?

S.: It’s foreign, don’t you see? (He shows the inscription on the box). Everyone knows it must be good, not only... [...]

K.: Twenty-six thousand is what you pay for this tea.

S.: But I haven’t finished doing my shopping. I want some chocolate too.

M.: I would like this foreign kind. And how much is it?

K.: The same as Sławek’s. Do you want something else?

M.: Yes. [...] I know! Three kilos of apples and three of potatoes, please.

K.: I’m busy weighing. Maybe you could put them into a shopping bag, and give them to me so I can weigh them.

M.: Just a moment! (He begins to throw blocks into the shopping bag).

S.: Karol, weigh me this chocolate!

K.: Give it to me. (He puts it on the scale and places weights). That will be one kilo. Aren’t you going to pay? You’re standing here and you’re not paying... I told you the price. Give me those coins! (He reaches out his hand).

M.: I have it already. Here you are.

K.: Wait a minute. I must give back change. One change is for the tea. (He gives a “banknote” to M.) Take it. And the other change is for the chocolate. Here you get less because the chocolate is expensive. I’ll give you small coins. [...] (He gives “coins” to S.)

Appendix 2

Before Christmas

Five children are drawing. E. is the observer.

Ala (6;8)

A.: I have a big teddy-bear. I sleep with him. I can't fall asleep without him. And I like dolls with long hair.

E.: And do you want any other presents for Christmas?

A.: Yes, a Barbie doll.

E.: Do you think your parents could buy such a doll?

A.: I always ask for it when I see a doll like that but my Daddy tells me it's too expensive [...]

Mira (6;2)

M.: I want a Barbie. This one in a long dress. (She draws also two little boxes).

E.: And what's in these boxes?

M.: A teddy-bear and another teddy-bear, one next to it. He's his brother. (In answer to the question whether her mother could buy her those gifts, Mira says) Oh, no! Of course not! How much would a Barbie like that cost? A lot!

E.: But how much is a lot?

M.: She costs so much there wouldn't be money for bread and butter.

E.: And if you had a lot of money, what would you want to buy for your parents?

M.: For Mummy some warm shoes, so her legs wouldn't get cold. And for Daddy, a trip around the world. (E. comments that her father could be away from home a long time and Mira replies): I could buy a walkie-talkie so we could talk between rooms.

Paweł (6;1)

P.: I want a mechanical cat run on batteries, because my friend in kindergarten has a cat like that.

E.: Could your parents buy you a cat like that?

P.: No. it's too expensive. They could only buy me a mechanical chicken run on batteries. A cat is too big. (He wants to buy presents for the other family members). For Mummy flowers. Tulips or roses. For Daddy... My Daddy would need a little dog. A real one. For Mummy a thing ... a washer. So she won't get tired. For Daddy... No, no... I'd like to buy him a rocket. A real rocket, so he could fly up to the sky. My grandmother would like a washing-machine that could wash all alone. I would fix the electricity for my grandfather. For my aunt, cakes. And for the whole house, a vacuum cleaner.

Marek (6;1)

E.: Imagine you have a lot of money. What presents would you buy for your parents and relatives?

M.: For Mummy, a new sweater. For Daddy, jeans. For my brother, things he needs for school. My grandmother needs a flat iron, because the one she has is out of order. For my grandfather, a sweater [...]

Kamil (6;6)

E.: Where will you spend your holidays?

K.: Holidays... This year we were in Bystra. We climbed the mountains. It was a good place. Everything was just great.

E.: How do you think, how much money should you have for a holiday like that?

K.: A lot of money.

E.: Why?

K.: Because it was a good place... There were good breakfasts. Everything was good. [...] You had to have lots of money.

Appendix 3

King

Agata (6;4)

A.: The king has a colorful palace. He is good to the people. He helps the people. He shares money,

he gives them money. He builds them houses.

E.: And what does he do to please the people?

A.: He helps the poor. People go to him and ask for money. And he gives them as much as they want.
Ania (6;5)

A.: The king is very good, helps everybody, even the bad people. If somebody doesn't have something, he always gives it to him.

E.: And how does this king rule his kingdom so that people live well?

A.: If somebody didn't have money he gave them some, a bagful, and then they live well, because they were rich and could buy everything they wanted.

President

Marcin (6;7)

E.: What would you do as president to make people live well?

M.: I would give them money for bread, for cheese.

E.: What else?

M.: So that it would be well, so that nobody wanted to kill for money when he hasn't any. [...] And for the children... I would buy them toys. They could go to school, they could buy things. So that they would live well.

Bartek (6;5)

B.: For it to be good in my state... for people to have a lot of money, and gold, so that they would be well off. So that they would have a lot of nice cars. I would make them an exhibition of guns, swords, pistols, sabres...

E.: And it will be good for your state?

B.: Yes. And I would tell them all to build a lot of shops because if not, if they didn't build them, then they wouldn't have much money. [...] For the children, the little ones, I would buy a little bed, and for children like me, six years old, I would make them a couch. And for the parents a couch too, a big one. For two... For my grandparents, I would make a very big couch so that they could fit into it.

Dominika (6;10)

D.: I [as president] would give them [people] a lot of treasures, jewels, money and lots of everything. So that they would be happy. [...] Their houses would be studded with gold, they would have pretty windows. People would have lovely clothes made of gold, everybody would have little crowns, even small children. They would have nice shoes of real gold, and cups and benches all of gold. People would make bread of wheat, drink different juices, and have butter and milk.

E.: And where would you get money from?

D.: My servants would make ducats of real gold. And I would get money from them.

Appendix 4a

Money

The observer asked children the following question: What comes to your mind when you hear the word "money"?

Bartek (6;10)

B.: I had five thousand, and once I skidded near a road sign and fell down [...] I was insured, and I got three hundred thousand... no, two hundred fifty thousand. And at home I had ten, so together I had three hundred thousand and fourteen thousand. And I had those fourteen thousand with me at the market but I didn't buy anything, and I gave three hundred thousand for a computer because my brother and I had bought an "Atari".

E.: And what else about money?

B.: For example, there is lots of money in a bank. So, for example, when you have a kiosk... my father has a kiosk, then for example people come in, and buy and there's money. Some people haven't any money at all, they sit on the streets... And you can buy yourself different things, you can make purchases, you can exchange... you could... If one didn't have any money, then one would die because one has to eat to grow up...

Piotruś (6;10)

P.: Bank. Pocketbook. It [money] is rectangular. Some [money] is thick, some is thin. You can buy ice-cream and cakes with money.

Przemek (6;4)

P.: Bag...

E.: And what else can you tell us?

P.: They are rectangular. One pays with them. I heard a story about stealing money, how they steal and run far away, one can't catch them...

E.: And what else?

P.: One pays for a TV set, a video, cassettes. And for parking when it isn't free. [...] You're not allowed to tear money, throw it into the garbage can, bite it. One sorts money: red to red, yellow to yellow...

Appendix 4b

Shop

Małgosia (6;8)

M.: People buy in a shop. They close a shop. They open a shop.

E.: What else?

M.: The shop is being renovated.

E.: And what else?

M.: Children buy in a shop... a lady tries on in a shop.

Ewa (6;10)

E.: It has doors, a roof, a small window. It has a board [counter], a floor, shelves, cups, baskets. You have a piece [of paper] with what you want to buy. There are scales. hooks are hung on the shelves, sausages are hung up. When somebody buys something he has to look at the price.

Marysia (6;3)

M.: Bread, butter. You buy. Sausages, meat. There are scales for weighing, there is placed on it...

E.: And what else?

M.: A lady sells. That lady says how much you pay. You give her money. There are baskets too. You can take one and buy some apples, carrots, anything.

E.: And what else?

M.: That's all. Uhuh, potatoes, when you haven't any at home, eggs.

Appendix 4 c

Bank

Piotruś (6;8)

P.: I have a bank. I take money from a bank. They are building a bank. There are long cash desks, and there they have things to hide. And there are ladies sitting, and if people come, they ask for money - poor people - and these ladies give out money. They take a piece of paper, and sign, and give a stamp.

Ania (6;4)

A.: In a bank you sell tickets. People buy those tickets and then get in a train. And a man comes around and he takes away those tickets.

Paweł (6;10)

P.: In a bank you exchange money. And if somebody wants to steal, there is a bell. In a bank there are different cash-desks, ladies sit there. When somebody comes in and exchanges money into dollars...

E.: And what else?

P.: There is a big house and there are big cash-desks, copybooks, calculating machines. And I don't know anymore.