

Piagetian and the 3-6 year montessori child essay

[Technology](#), [Development](#)



“ I have some works here, with which I need some help. Would you like to help me? ” My invitation to Max, Sophie, Christian and Kate accepted, I proceeded to share, challenge, interview, and observe.

The tasks I presented illustrated the phenomena of cognitive development in early childhood, the stage Jean Piaget calls preoperational. While Piaget refers to his developmental theory in “ stages” he does not feel that the stages happen at specific times but that they are sequential and one depends on the previous. The distinguishing characteristics of the preoperational stage stand as barriers to logic and the challenges to cognitive thinking and growth.

They will be broken down as the child moves toward a more mature stage. These characteristics include: egocentrism, transductive reasoning, centration, Irreversibility, Animism, Inability to distinguish appearance from reality. With physical experience, social growth and interaction the child addresses these barriers and moves past them. This process is an internal one, influenced by the child’s immediate environment, but cannot be changed through abstract explanations, repetition, reading, or demonstration without the element of hands-on practice. Experiment I: Conservation of Volume The Fluffy Factor Materials: •Two identical natural zippered pillow cases, both square, both natural muslin, both ironed to a smooth and crisp appearance •Two 12 x 3 inch lengths of red hand-dyed combed wool batting •scissors, ruler In each interaction with individual children, the venue was set up as any new lesson: teacher on dominant side of the child, work on the table in front, materials presented on a tray and then moved to the table for working.

I chose this set up rather than sitting opposite the child to maintain the intimacy already established in our classroom relationship. The Set up: child would have detected the change in position, and the number of anomalous responses could increase. Hypothesis: Conservation would increase with age as the barriers to logic decrease. The younger the child the more likely she is to offer an illogical response. As the child matures, her ability to apply transductive reasoning and logical thought expands. Presentation: 1.

Bring the tray to the table 2. Place the pillow cases side by side, zipper open and up, on the table, with work space open at the front of the table 3. Lay out the wool batting lengths and the ruler in the front space, horizontal and parallel to each other, ends flush, with space between them 4. Place the scissors to the right of the pillow cases 5.

Remove the tray to the upper left of table 6. Present the matching lengths of batting and question 1 7. Place each piece in a pillowcase and zipper the pillowcase, being sure to settle each piece in matching orientation inside the pillowcases. 8.

Present question 2 9. Remove batting and present question 3 10. Measure both pieces of batting.

Cut one piece of batting into three 4-inch lengths using the ruler as a guide. Place them end-to-end and parallel with the whole and equal piece. 11. Place the three pieces in one pillowcase and the one piece in the other. 12.

Present question 3 13. Reassemble the work and thank the child. Questions: 1.

Are these the same amount? Whole batting 2. When I put them in the pillowcases are they the same or is one fluffier than the other? Whole batting inside the pillow case 3. Are these the same amount? Whole batting returned to table 4. When I put them in the pillowcases are they the same or is one fluffier than the other? Cut Batting inside the pillow case Notes: A logical response is indicated by a " 2" on the scale; illogical by a " 1" Conclusion: All the children were captivated by the texture and color of the hand-dyed wool batting. We spent some time touching and talking about the material before proceeding with the task. The material was placed on top of the pillowcases, next to each other and held in the hands for weight and texture information. Sophie could not generalize about the shape or amount of the batting at all, even when offered further suppositions with which to work. Information about the length and thickness of the batting were not enough to draw her attention away from the fuzziness of the material.

This is an example of centration in that the child can only see the shape, which eclipses the reality that the amount was not changed by being put in and out of the pillowcase. She could not grasp conservation at any point in the task. " They are too fuzzy to fit in the pillow. It will just explode. How will you get it in there? " •While Max did decide that the amounts were equal before being put in the pillowcases, he did feel the amounts had been changed by being put in and out of the pillowcase.

He perceived that the amount was not conserved after the equal pieces were cut. His thought process saw more pieces and for him that meant more batting and a fluffier pillow. " It is all crinkly.

They are not the same amount now. What's inside the pillow now? " " The pillow with the lots of fluff is bigger" •Christian saw the same amount before and after being put in and out of the pillowcases. When it came time to decide if the multiple pieces and whole piece were the same inside the pillowcase, he could not perceive the conserved amounts and replied that the pillow with three pieces of batting was fluffier than the pillow with one equivalent piece. " I would want that pillow at nap time. It will be much better to sleep on. " •Kate understood that the batting did not change and remained equal throughout the task. She was able to employ transductive reasoning, and was not impeded by issues of centrim or irreversibility. " They are just bended up but the same.

" The pillows are the same, too, because the insides are just first ones, later and chopped up. " Experiment I: Stereognosis and Egocentrism What's Mine is Mine and What's Yours is Mine, too Materials: •Two identical natural zippered pillow cases, both square, both natural muslin, both ironed to a smooth and crisp appearance •A model of an animal inside the first pillowcase (change with each child) and a die-cast car in the second pillowcase Two tables, 4 feet apart with chairs set at the tables so that the subject and presenter are back to back. I chose this set up so that it felt like a regular work, so that it would feel kind of fun and mysterious to the child, and so that the pillow would be supported on the table and the child could relax. We are back to back to eliminate visual distractions and inadvertent facial cues. Hypothesis: Egocentrism as a barrier to logical thought would decrease with age.

The younger the child the more likely she is to offer an illogical response. As the child matures, her ability to apply logical thought expands. Presentation:

1. Place one pillowcase on each table 2. Invite the child to take a seat 3.

Ask the child to put her hand inside the pillowcase with the animal and describe what she feels. Ask her to guess what the object is. Set up: 4. Say to the child, " Now it's my turn" and describe what you feel.

Say to the child, " I think that it is a small toy car" 5. Let the child know that it is time to switch places 6. Ask the child to put her hand inside the pillowcase with the car and describe what she feels. Ask her to guess what the object is. 7. Say to the child, " Now it's my turn" 8. Ask the child, " Do you know what I am feeling in the pillowcase? 9. Take both items out of the pillowcases to view.

Note: " Child thinks I have the same object as he or she" indicated by 1 " Child does not know what I have" indicated by 2 " Child knows my object is the one they had before" indicated by 3 Conclusion: I was struck but the completely confident responses at both ends of the outcome spectrum. Here are some observations and quotes that seemed significant in the process.

- Sophie talked a lot about what she was feeling but tended to go off on tangents about any thought that was triggered by the stereognosis experience. She did not guess the object correctly (camel) but named the object (giraffe) during the period of exploration and free association. When we switched, the experience was similar, she explored the car and then began sharing a story about a friend. When she was asked what object I was feeling she said I had a car, too. She was completely distracted by the

opportunity to talk about her life. The objects were irrelevant and ethereal concepts.

“ I saw the jungle book and it had all the animals even a giraffe like at Zoolights where we went for Christmas. ” “ I know what this is... It’s a camel. ” “ My friend Danny has cars but I only like princess stuff. ” •Max knew what animal he had right away (Elephant). He was very methodical and clearly enjoyed the mysterious fun of the task. When we switched he took more time, and furrowed his brow.

When he was asked what object I was feeling he stopped. Looked directly at me for a long time (5 or 6 seconds) and said that he did not know. Here, it occurs to him that he cannot know what I think, but he cannot make the leap to transductive thinking—recalling the object of the previous stereogenesis experience and retaining that information through the next experience. This is a elephant, I can tell” “ Its a hot wheels, a little one. ” “ I don’t know.

I don’t know what you are hiding. ” •Christian was not very sure about his animal (lizard) but when the question was repeated he came close to identifying it (snake). He knew right away that there was a car in the second pillowcase, but seemed very distracted by not being able to look at it right away.

He became obsessed with the car in the pillowcase and left the previous experience with the animal behind. When he guessed what I was feeling, it was as if anything could be in the pillowcase and that I could have something

surprising. Snake. Not a real one. A real one is bigger and wetter” “ It’s a car, the doors open like some of mine at home. I bet I have this one, too.

I have a lot of matchbox cars and I can play with them all at the same time. ”

“ I’m not sure. You might have a car, too. ” •Kate guessed her object (whale)

but only after verbal trial and error. She knew that the second object was a

car and commented on the fact that she could not tell what color it was but

could try to guess and see if she got it right. When asked if she knew what I

was touching inside the pillowcase she knew that I had the whale. She was

interested in “ Playing again”. “ A alligator...no...a eagle...no...a whale.

It’s a whale or a big fish” Summary: Results confirmed the hypothesis: the

younger the child, the more deeply and completely egocentric. Centrism was

also a factor in the barriers to logic in this experiment because the fact of the

“ mystery bag” seemed to heighten the perception of extremes. In depriving

the subject of much sensory information, the few clues that were given

through stereognosis seemed exaggerated to various degrees with each

child. This interpretation and experiment with Piaget’s theory points to

stages within stages, that is to say, there is clearly a wide spectrum of

cognitive development. As the experiments are born out, the findings do

map the change along the growth of the 3-6 year old, progressively

expanding to a more assimilated way of perception with each year of growth.

This growth is unique to each child, Piaget’s theory of development and his

fascinating view of the evolution of cognition offers an immense resource for

addressing the individual child, and a community of preoperational learners.