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# PSYCHOLOGY OF CHILDREN'S ACQUISITION ACCORDING TO JEAN PIAGET

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## Short Profile

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**ABSTRACT:**
Piaget (1896-1986) is a great epistemologist who started his studies in compatibility and followed it in the fields of psychology and biology. In his opinion, the subject of identifying compatibility,which was the connecting factor between these two fields, was based on genetic epistemology and dealt with transformations of cognition, laid the basis for genetic psychology, and evaluated the mental process in the course of changes. Piaget believes that for cognition, checkout and transformability are important, and it requires restriction of issues. According to him, cognition is resulted from permanent interchange between the entity and environment,biologically; and between thought and matter, psychologically. In this way, it determines how reality is reconstructed. Cognitionsare rooted in interrelationships and in this way, by transformations and actions on objects, the child transforms and cognizes them.

KEYWORDS
*Piaget, growth, children's psychology.*

## INTRODUCTION :

Psychologists have always tried to explain the process of acquisition and to theoretically explain it with the help of different viewpoints. Of course, these efforts too, like every other scientific production produced in the circle of creating knowledge, are usually influenced by the theoretical rootand by the paradigms liked by the theorists. Piaget's theory, like those of Tallman's, Bandura's and Norman'sis related to cognitive paradigm. Plato invented this paradigm and it has reached us through Descartes, Kant and psychologists of mental strength (sensual strength). This paradigm emphasizes on cognitive nature of acquisition. Anyway, psychologists of cognitive theories believe that acquisition - especially in human beings-cannot be explained satisfactorily according to conditional perceptions. According to them, the learner forms a form of cognition in his mind which is maintainer and organizer of information about different events that happen in the learning situation. Epistemologists mostly rely on information resulted from perception, insight and cognition of the learners; but still, some believe that Piaget's theory has a lot of common aspects with theories of functionalists like Thorndike, Skinner and Hall; because it relies on Darwinism more than on any other theory, and functionalists too, because of emphasis on acquisition and adjustment with the environment, reflect the effect of Darwinism.

## We are facing these questions in this research:

1.What was Piaget's motivation of studying human growth?
2.How does Piaget define man?
3.What are his beliefs about education?
4.According to Piaget, does internal knowledge exist or not?
5.What is the nature of knowledge in Piaget's opinion? Is knowledge concrete or abstract?

## Motivation

Since recognizing a scientist's stages of academic growth is very influential in a deep understanding of his theory and its objectives, first, we deal with the course of formation of Piaget's system of epistemology so that in this way, we can find out about his motivations and objectives by concerning himself with epistemology.

In the period of his education and studies, he "became familiar with biology, philosophy and psychology and his mental structure could be considered as a combination of them... He stepped into the world of philosophy by studying Bergson's famous work titled Creative Evolution,and after that, he studied other works of philosophy" (Mesbah, 1996: 578).

After a while, he got away from Bergson's viewpoint (cognition and knowledge based on twofold views on life and matter). By getting away from Bergson and getting closer to Kant and epistemological ideas, for Piaget who now was sure that he had to rely on searchable and searched facts, there was no way other than leaving philosophy and building his ideas on the foundation of a cognitive study which ended to objectivity (Mansour and Parirokh, 1995: 27).

Therefore, he decided to initially study children's psychology and after studying development of mind, apply his findings to answer broader questions about epistemology and philosophy of source of knowledge. He named this new design "genetic epistemology" and in this way, he founded genetic

epistemology (Mesbah, 1996: 578).

In his Biology and Knowledge, he announced his opposition to the transcendental man and stated: "in the discussion of man's epistemology, first we should talk about biological organism" (Latifian and Bashash, 2012: 223).

Of course, he was never after genetic epistemology on the basis of denying philosophy or its necessity, but believed that philosophy by itself was incapable of solving the problem of cognition. "his criticism was about some of the philosophers in his own time who believed philosophy was enough for recognizing truth and wanted to reach truth only by thinking about abstract things" (Kardan, 1996, 56, 70).

As it is clearly mentioned in these lines, "the objective of surveys of this great scientist was not knowing children and improving their growth and educational methods" (Dadsetan, 2008: 10).

And also as some of those who study him mention, "his psychoanalytic surveys were not a means of responding epistemological issues" (Bagheri and Khosravi, 1999: 8).

Of course, the fact that in order to reach a new epistemology, he wanted to start with children's psychology, was not a secret; as he mentions: "I desired for a genetic epistemology i.e. a science which by focusing on this issue (that how cognitions grow) or the way of their historical formation and growth, determines and explains the issues of cognition" (Kardan, 1996: 7).

Therefore, we should never ignore this issue while studying and applying psychological works of Piaget that his ideas and theory of cognitive developmentwere formed with the motif of epistemology. He himself was also determined to attain this objective and organized the route of his surveys on the basis of this intellectual background. It was exactly for this reasonthat he was criticized by others many times, so much that "in 1965, he wrote the book Insights and Illusions of Philosophyin reply to philosophers who had criticized his epistemological viewpoints" (Bagheri and Khosravi, 1999: 8).

For reaching his goal i.e. studying the ways of formation of cognition in man,Piaget applied a modern method called "genetic epistemology"; because, "Piaget's assumption was that if he could understand how knowledge is constructed in children, then he could understand what knowledge was; because structure of knowledge shows its nature, exactly as the structure of chair shows the material applied in it" (Seif, 2008: 69).

But before entering such a field, he had to complete his perspective in terms of truth and nature of cognition and get to know that cognition and knowledge is an abstract issue and "issues related to abstract and immaterial things can never be solved with sensual experiences" (Mesbah, 1998: 112).

And it is not possible to evaluate and recognize an abstract issue with materialistic methods and tools. In fact, we can say that most of the critical comments on Piaget are rooted in this point, but "it seems that the main direction of Piaget's life is designed through adjustment issues and specially their forms in the framework of zoology"18 and dominance of this biological perspective and probably his short-term experience in philosophy has made him ignore considering this issue that "such issues have to be solved intellectually by relying on mental axiom" (Mesbah, 1996: 112).

## EDUCATIONAL OBJECTIVES

Some points that have to be evaluated and studied carefully about every theory in the field of humanities arethat theory and its designer'santhropological principles; because the theorist, exactly, according to the type of his anthropology, designs some objectives. In other words, with the cognition

he has developed in his mind about man, he holds objectives, and his theory is, in fact, a framework and principle to reach those objectives.As a result, by analyzing and studying objectives that a theory follows,it is possible to find out its designers' type of anthropology.

Piaget's theories on science and education are no exception to this principle. His experience and education in natural sciences made him never to look at man as superior creature who is created with the goal of reaching spiritual and divine perfection.He considered man as any other organism who needs adjustment with the environment and needs to solve his problems; and in this career, affluent need of man for knowledge, for adjustment, will be more than that of other organisms.

It is the influence of these very biological principles of Piaget on his anthropology that made him disbelieve in divine theology for determining educational objectives; instead, he considered the role of society and social organizations as an authentic source against the role of religion and religious thinkers. He writes in his book, Psychology and the Science of Education about the objective of education that: "determination and stabilizing the objectives of bringing up the next generations is definitely the duty of society,and the society always fulfills this duty with full authority in two ways: first, spontaneously, with the force of time, customs, traditions, beliefs, family, economic needs, etc; this means that in different forms of collective action in which by putting the new generation in the form of stables or mobiles compared to old generations, societies maintain themselves and get transformed; secondly, by the thinking way and by the use of governmental organizations or private institutions according to the forms of desired education" (Kardan, 1995: 19).

In other words, according to him, in order for the society to achieve its goals, it firstly should put the educational system along with its social and cultural changes (and with the bigger society of mankind); secondly, it should prepare children and adolescents to adjust their actions and thoughts with the new occupational and cultural needs of the society.

Considering his viewpoint on man and knowledge, and considering the statements he has made on education, we can say that: the greatest goals determined for education and consequently for man, are to bring up social and productive individuals, and "altogether, we can say that Piaget looks at education from the viewpoint of a scientist and regards the western democracy as the utopian society that the educational system must be struggling for."

"Perhaps, we can conclude that because Piaget summarizes the objective of education as building a creative spirit and balanced personality in children and adolescents, and considers human perfection as adjustment with the new needs of the changed societyin the modern sense, he gets closer to thinkers like Davie who looks at education from practical and social perspectives and does not go further, and leaves spiritual upbringing at the doorstep of religion" (Kardan, 1995: 15).

Therefore, the educational system designed and practiced according to the views of Piaget can perhaps bring up creative, thinking and social human beings and hand them over to the economic and social objectives of the society, but it definitely cannot guide the learners in the true direction.

## Internal Knowledge

Another subject about the type of Piaget's genetic epistemology which is of great importance is the source and the way of formation of knowledge according to him. He basically believes that the factors of mental development are in four aspects of biological maturity, 28 activity, 29 social experiences 30 and balance seeking 31. 32 he looks for the source of mental issues such as cognitive

processes in the infanthood and in the biological and hereditary data, and regards the biological organisms as theoutlining factors of children'sinitial behaviors. He also regards learning and experience which are resulted from contact with external objects as influential and necessary in formation of mental structures (Mesbah, 1996: 578).

He even strongly comments on it and regards the individuals interactions with the environment and society as the source of all knowledge: "the point of departure for every knowledge...is in actions...objects and their regularity are known to us only on the basis of operational structures applied on them and form the framework of the process of absorption (internalization)...in this way, the departure point of knowledge is neither sense nor cognition, but action" (Bagheri and Khusravi, 1999: 37).

In fact, it is by believing in such a source of knowledge, internal knowledgeof man in himself and also internal knowledge of mental situations that Piaget rejects his own feelings and emotions, while "knowledge and awareness of everyone about himself as an understanding entity, is itself an undeniable knowledge" (Mesbah, 1999: 172).

It is also considerable that "what is considered as the foundation of all achieved insight and without that, basically our science about the external world would be unjustifiable and un-provable is the internal knowledge"(Fayazi, 2007: 66).

On the other side, internal knowledge of man about himself cannot be resulted from senses and after interaction with society and environment; because every human being "is aware of his self with internal intuition,not through sense and experience and with mediation of mental images and concepts" (Mesbah, 1999: 172).

Piaget also insists that a child, after birth, and before a certain level of biological maturity and interactions with environment and society, has no action. He says in this regard: "there is no anteceding mental feature" (Bagheri, 1999: 37).

This is while one of the anteceding features of man,that is present in birth-time and before every other knowledge, is theinternal knowledge of his self. In this regard, AllamehTabatabaibelieves that: in the time of birth, man lacks the acquisitive knowledge (lacks sensual, imaginary and mental knowledge), but the internal knowledge of man about his self -although very weak-is present since his birth-time" (Moallemi, 2008: 149).

## Abstractness of Science

Piaget wanted to find out the nature of knowledge by discovering the way or ways cognition is formed (Seif, 2008: 69).

Now, after Piaget has found out the ways cognitionisformed, the question is that what is the nature of knowledge in his viewpoint? Is knowledge and cognition a materialistic entity that is formed, understood and built in complicated structures of cognition? Or knowledge is basically abstract and its understanding and formation can happen only by an abstract entity?

He has not clearly commented in this regard, but says: "the only thing that can be placed in the anteceding subject is function that leads to more and more complicated structures and that is the way knowledge is provided for human beings" (Bagheri, 1999: 37).

Therefore, if this statement is the last stage of forming knowledge in his opinion, naturally, knowledge also should be considered something material that is made through these complicated

structures in human brain; and of course, this understanding is compatible with his anthropological principles.

But the fact is that such a thing is impossible and there are different reasons to prove science is abstract and that senses and brain are the initial tools in formation of acquisitive knowledge of man. In this regard, we can refer to "impossibility of patterning big in small"; "seeing is one of the most ordinary senses which is fancied to be concrete and materialists interpret it as some physical-chemical and physiological interactions. But by reflecting on this sense, we can find out that the action itself cannot be considered as a material issue, and material interactions can be attributed to it only as numerical conditions;because we see big faces that are tens of square meters i.e. many times bigger than all our bodies, let alone the visual organs or brain, and if these conceptual faces were concrete and patterned in visual organs or in other limbs of body, they could never be bigger than their places; because materialistic patterning and printing isimpossiblewithout conformity with the place. And considering the fact that we find these conceptual images in ourselves, we have to accept that they are related to a level of self (exemplary level of self) and in this way, both their abstractness and also abstractness of self are proved" (Mesbah, 1999: 223).

Therefore, as the Muslim scholars like MullaSadra have defined science, the reality of science is "entity, and not every entity, but the mere and non-material entity which is empty of all doubts of nonentity" (Arab, 2012: 23).

And such an entity cannot be placed in human mind.

## The growing stage of inability in acquisition according to Piaget:

Some children who are unable to learn cannot regulate and have similar weaknesses. Another feature of the children in this stage which Piaget introduces, is disability in considering the visage of aspects of astimulus; theseinconsistencies of acquisition are observable in older ages.

As an example, children who have difficulty in reading are unable to concentrate on all conceptual features of a stimulus (Shomali, year 8: 21).

## Psychological growth of learning education according to Piaget:

It is not enough that an instructor relies on his artistic instinct to finish his work, but he has to have understood another layer of this movement which has scientific aspect. Piaget is unhappy that specialists of education do not pay attention to scientific aspect of their work and states that: "it is almost unbelievable that in a field where experimentation is so easily attainable, an education specialist does not organize systematic experiments,and satisfies himself with getting questions replied according to his beliefs and statements (Danesh, 1997: 168).

## Child growth and psychological acquisition according to Piaget:

Jean Piaget, one of the greatest psychologists of the twentieth century believes in four stages of cognitive development:

First: is the sensual-dynamic stage which covers the period between births to the age of 2. In this stage,

senses and movements of the child become the basis of his growth and the child finds the relationship between his actions and their consequences and finds out concepts such as object, space, time and scientific aspect.

Second: is the pre-operational stage that covers the ages between two and seven. In this stage, language, imagery, having wider relationships with others, and symbolic thinking appear, and the child acquires this ability to recognize between objects and his senses.

Third: is the operational stage in which the seven to twelve year-old childrencan attain a concept of logic and discover the rules.

Fourth: is the period after the age of 12 when the child enters the stage of abstractness and along with struggle for coordinating himself with the environment, tries to coordinate the environment with himself (Barzin, 2011: 34).

## Two points of Piaget's opinions in learning course curriculums and cognitive development:

Jean Piaget: Piaget's works in planning courses for the early periods of childhood are significantly influential

1.Acquisition of little children,qualitatively, is different from that of older children and adults. They learn through direct contact with the environment far more than through formal education that includes rules and symbolic and abstract principles.
2.From the cognitive development perspective, children pass different stages. Many children in the ages of 3 to 6 are in the stage of pre-operation and have not yet acquired the ability to think logically or they cannot think abstractly about the world and their environments. Their thinking is directed institutionally and with personal conception. They can concentrate on only one of your features at a given time. This situation restricts their conception and cognition (Mofidi, 1995: 12, 13).

## Different games according to Piaget:

1.Practical games: are the first games that children play in the sensual and dynamic stage. These games don't need thinking.
2.Symbolic (figurative) games: originate from action, which means mind takes multi-imagery sensual-dynamic and figurative situation. For example, when the child pretends to be asleep in the bed, he uses a figurative mind.
3.Regular games: are the third form of the games that start after the ages of 5 or 6 and reach their final stages of development in the age of 11 (Ahmadvand, 54, 51, 1993: 45).

## What does Piaget say about sensual-dynamic intelligence and mental imagery?

From a developmental perspective, crossing a sensual-dynamic intellect and reaching an imaginativeintellect happens by imitating an absence of pattern i.e. imagination in the level of

objective actionnot in the level of thought.

When the child can produce an action in the absence of an open sample, the first steps of imagination that require internalizing the action and creating mental image have been taken.

It is only then that the child will take hold of the tools of symbolic actions, especially language, tools which will provide the possibility of gradual access of thought to the conceptual level. From Piaget's point of view, mental image is not the direct continuation of concept, but it is an internalized imitation which gives an active copy of conceptual boards (Dadsetan, 1997: 135).

## What is the opinion of Piaget about child's experience?

Experience is not gained simply, but it has to be always internalized in the present cognitive structures of the child.

A new experience will be useful only when the child can give meaning to it.

An education which is far better from the child's level of change does not have a positive influence on the child (Rasta, Heath, Miller, 1992). In an inter-cultural evaluation, Sateland Scot (1979) approved the importance of initial preparation based on the Piaget and Gibson'stheory of initial conceptual skill for identifying the American and West German paralyzed students' improvementof acquisition.They evaluated initial acquisition of children by the use of a set of tests (Danesh, 1997: 166).

## CONCLUSION

Piaget, in fact, is a biologist and psychologist philosopher and his anthropological perspective of man is not a transcendental perspective typical of theperspectives ofdivine religions; but under the influence of biology, he considers man as an advanced organism who, for attaining final balance as well as compatibility with the environment and solving his problems, needs to gain knowledge; and that is why he has turned to knowledge of psychology and empirical study of cognition. Piaget emphasized on interaction of natural growth of child's talents with his connections to environment.

Piaget believed that the child is participative against the requirements of biological development or the imposed stimuli from outside and believed that the child has active interaction with environment and reaches adjustment in this way, organizes himself, and gradually builds his own world. He especially believed that the child should be considered a scientist or a researcher who tests experiences to see what will happen, the results of these experiments help him build semi-designs about the way physical and social world works. When the child encounters every new object or event, he tries to understand it in the framework of his own semi-designs. If the existing semi-design does not have enough compatibility with the new event, the child transforms the semi-design and by complication of the semi-designs, "structure" appears.

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