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## I. Kant and G. Hegel's views on subjectification of cognitive process

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### Abstract

The study is designed to form innovative cognitive technologies and processes from the analysis of classical philosophical ideas. The aim of the study is to analyze I. Kant and G. Hegel's philosophical theories of subjectification problem of general and scientific cognitive process.

Methods of study are logical-historical method and method of comparative analysis.

I. Kant's approach to past scientific experience is examined. The characteristic between a teacher and a student is given. Dynamic cognitive processes are expressed by some ways for material understanding: passive and active ways predetermining dogmatic and critical thinking. Different mindsets, such as ordinary, architectural, brilliant ones are described. G. Hegel's approach to understanding of the concept "cognition" from its subjectivity and objectivity is examined. Hegel's understanding of theoretical actions discovered in the usage of analysis, synthesis and construction methods is analyzed. The principle of a theoretical cognitive method including objective reality/existence and progress is discovered. Hegel underlines the progress connecting past and present which is a "substantial core", a product of mind and soul.

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### 1. Introduction

New science development is prepared by gradual, continuous improvement of scientific knowledge. At first sight, all revolutionary discoveries are an immediate breakthrough. Something new in science is explained by long-continued evolutionary changes of scientific facts done by the scientist of past and present. Scientific jump can be done by someone who is able to rethink past scientific experiences and update ulterior potentialities. Individual art performance of a scientist is carried out in different time intervals. It depends on many factors including subjective and objective factors.

Cognitive problems, scientific knowledge development are examined from different viewpoint in modern scientific literature. Philosopher-constructivists offer object cognition from the viewpoints of some principles (Cohen, 1889; Husserl, 1999). Pragmatic cognitive theory is based on the usage of practical situations in globalization and society informatization (Battler, 2013; Dewey, 2003; Stiglits, 2003; Fukuyama, 2007). Intuitionists believe in intuition in cognition (Bergson, 1992; Franka, 1916). Dynamics and structure of science and scientific cognition are examined in theoretical and practical contexts (Gorochov, 2012; Kuhn, 2003; Lakatos, 1967, 1994; Maturana et al., 2001; Polanyi, 1985; Popper, 2003, 2004, 1983, 2002; Stepin, 2000; Habermas, 1992, 2000, 2005; Hacking, 1998; Hill, 1965; Holton, 1981; Yudin, 2006).

### 2. Discussion

The authors pay their attention to the problem investigated by I. Kant and G. Hegel. This is a subjectification of cognition process. Understanding of this problem can help in the study of different cognitive action aspects.

The special interpretation of past and present connection in knowledge development is presented in I. Kant's works. In the paper "An answer to the question: What is enlightenment?" ("Beantwortung der Frage: Was ist Aufklärung?" in German) he writes about two human states which can be related to scientist characteristics, such as "minority" and "majority".

A characteristic feature of "minority" is inability to use your own mind. This is expressed in human shyness, embarrassment and necessity to be led by someone. I. Kant thinks every man should use his own mind (Kant, 1966<sup>a</sup>).

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To become an adult, to use his own mind, to have his own way of thinking a man should learn for a long time. Teacher – student relations may be different. The teaching method when students get knowledge in a passive way is called acroamatical. It means that a student is just a listener. But when students take in active part in learning, the teaching method is called erotemactical. Erotemactical education is divided into a dialog-oriented way of teaching when mind/intellect is working and catechetical way of teaching where memory plays an important role (Kant, 1966<sup>b</sup>).

In our opinion, I. Kant overemphasizes teaching methods making them independent. In reality students can be taught in an active and passive ways. When acquiring of knowledge is passive, we see a dogmatic way of thinking without critical analysis. Thus, I. Kant is right analyzing acroamatical method. But it is difficult to draw a line between a dialog-oriented and catechetical way of teaching in erotemactical method. Reason and memory in understanding of the past and developing of present must work together.

I. Kant's ideas about different types of intellect are interesting and contradictory. The philosopher distinguishes ordinary, architectonical, brilliant mind differing from each other by cognitive power.

A man with ordinary mind can understand all branches of science, as he has historical cognition.

Architectonical mind allows a man to understand relations between all sciences. But in spite of its power architectonical mind needs philosophical knowledge to use historical knowledge. Men, having an architectonical mind, are talented, self-taught people.

I. Kant considers a genius as being characterized not only by content knowledge, but by the intensity of knowledge understanding. This man of genius is a man presenting a century in all its spheres. Genius is a talent and natural ability. A man can not be talent with the help of learning. Talent structure includes productive wittiness, perspicacity and originality. These qualities allow a man of genius to introduce something new, to destroy something habitual. I. Kant thinks that a man with a talent for invention is a genius, but this name is given to a master who can do something but not to a master who knows and understands much. The name is also given to a master who is able to create something new and original that can be an exemplar. Thus, a man of genius is an example of talent originality (Kant, 1965).

A talented man not only knows and understands, but also creates an original art which is an exemplar and paradigm in science.

I. Kant underlines that genius in cognition process is an inherited quality. In art a man of genius realizes usage freedom of his cognitive abilities. A man of genius is a darling of nature, his life creates an institute (methodical education by rules) for talented people (Kant, 1966<sup>c</sup>).

However, I. Kant thinks that following for a genius is an aping. There are other imitating ways, such as imitation of originality in general. So the philosopher supposes two connection modes for thoughts: one is called manner (*modus aestheticus*), another one – method (*modus logicus*). They are differentiated by criteria. Manner criteria are sense of unity and the method is followed by principles.

Thus, I. Kant opposes uncritical stance on genius achievement of the past. He thinks that no aping, no imitation can bring benefits to intellectual activities. Slavish imitation makes science development stay away. But, from our viewpoint, I. Kant is wrong considering that talent only depends on biological factors without giving possibilities for development of creative science initiatives in definite social conditions. In this question he comes into contradiction with himself. Thus, in his work "Critique of Aesthetic Judgment" writing about the first judgment peculiarity he underlines that every person does not begin the activity basing only on subsistent qualities in mind usage receiving judgments from common aprioristic source. He is preceded by other people with their activities and their activities show the way. Their followers, not being imitators, find principles in themselves and create their own development way. It means that there is a continuity between activity results in cognitive process. He considers that the aim of success in art being an institution for men is the life usage of gained knowledge and skills (Kant, 1965).

Analyzing relations between different cognitive stages, I. Kant underlines subjective factors. His judgments might lead to knowledge apriority but sometimes posteriori knowledge and experience are more preferable. In this question he shows inconsistency throughout all his philosophy.

G. Hegel was more consistent in this question. Thinking about mortality and immortality in "Lectures on religion philosophy" he notes that a man is immortal thanks to cognition as being intellectual he is not a mortal, animal soul but a heavenly and free soul. Cognition and ideation are his immortality (Hegel, 1977).

Analysis of Hegel's views on past and present relations in cognitive activities should start from his understanding of the concept "cognition". Philosopher's idealistic platform does not prevent him from discovering important facts of cognitive process. The second form of idea was called poor awareness by G. Hegel. In his opinion idea is divided into subjective and objective. Its subjectivity is defined in commonality, there are differences in it, such as contemplation. But it is a judgment as a special differentiation (Hegel, 1974). Thus, the soul coming out of organic materiality needs objectified world.

Cognitive process destroys subjective and objective one-sidedness in two ways. Firstly, intelligence/mind tries to overcome idea subjective one-sidedness with the help of understanding "things of the world in itself" (*der Aufnahme*), filling "abstract self-belief". Secondly, putting away one-sidedness of objective world, intelligence/mind aims at the definition of objective world with the help of subjective inner world, known as real objectivity. According to Hegel, the first interest is knowledge interest to truth, cognition is theoretical idea activity; the second interest is aspiration of good to its expression - a will, as a practical activity (Hegel, 1974). Thus, G. Hegel tries to solve this question through practical human activities.

Analyzing theoretical activity, Hegel starts from the theory of final cognition understanding it as "a prerequisite of a profound world". The essence of theoretical activity is explained in the usage of analysis, synthesis, construction methods.

What is an analytical method? This is concrete understanding, discovering its differences and giving shape to abstract universe. A man using an analytical method tries to lead individual to universal. Debating with theorists who prefer this method, G. Hegel underlines that such cognition is a distortion and the cognition that apperceives everything in its reality leads to contradiction.

Another method is synthetical. Cognition goes through notions existed in final cognition. This is a rational defined notion.

Synthetical method in its direction is opposed to the direction of an analytical method. Its started point is universal and this method goes from it to personal. Synthetical method reveals itself as a notion development in a subject (Hegel, 1974).

How do these method correlate? At first sight, their choice is random. Both methods go from external backgrounds. According to notion nature, analysis precedes synthesis, as empiric-concrete material should be raised to the universal eternal object and after that it can be send to synthetical method as a definition (Hegel, 1974).

The abuse of analytical and synthetical method usage leads to a construction method. The principle of this method is a formalistic way of philosophical and scientific material classification according to the existed scheme. Hegel thinks that idea and notion and objectivity unity are not clearly expressed (Hegel, 1974).

The final cognition needs proof, as theoretical activities are not satisfied and it leads to the idea of will, practical activities.

What is a practical activity according to G. Hegel? We agree with V.N. Kuznetsova's statement that Hegel examines neither the theory oriented on knowledge usage in practical activities for its success, no successful practice directed by theoretical rules (Kuznetsov, 1989). This is explained by the relationship problem between theory and practice interpreted theoretically. This is an abstract and theoretical, speculative investigation level. But G. Hegel was able to discover relationships between theoretical and practical cognition level in idealistic understanding, and contradiction between them.

Contradiction resolution put the one-sidedness of aim subjectivity away, and common subjectivity, another form of subjectivity, does not differ from the previous one. This is a content memory which is benefit and identity, memory about the supposition of theoretical object understanding (Hegel, 1974). Here will returns to cognition supposition in theoretical and practical idea unity. Overcoming the one-sidedness of theoretical and practical cognition leads to idea development.

Thus, in G. Hegel's philosophy there is a main thesis: absolute truth is cognized in a dialectical way. All human efforts are focused on the goal achievement in cognition development. In this case human cognition movements with the unity of beginning and end, a single and a part are very important. In early stages of development the absolute is limited, that is why it tends to the single, discovering of which is called a method (Hegel, 1974).

Cognition method called a speculative one by Hegel has two points: the beginning – the existence or immediate existence and progress movement.

According to G. Hegel, the beginning is a self-determination of idea. It is determined as an absolute negativity or notion movement makes first division (*urteilt*) and interprets itself like negativity (Gorochov, 2012). As an immediate existence the beginning is taken from contemplation and perception. This is the beginning of analytical method of final cognition. But the logical is a direct as a single, an existent as a supposed notion and as a direct. Thus, the beginning is synthetical as well as analytical beginning. So G. Hegel concludes that philosophical method is analytical and synthetical because these cognition points are in this method. Being analytical, philosophical method gives freedom to idea and observes its movement and development. Being synthetical it works as notion activity.

Progress movement is characterized as a positive idea judgment. A direct single as a notion in itself is dialectics which destroys its immediatism and commonality at a moment (Hegel, 1974). This movement is analytical and synthetical unity. In an abstract form a progress movement is the presence of something in existence and its transition into something new.

In this method dialectical laws are observed and the unity and struggle of opposites can be found. Opposites of cognition process move, condition and complement each other, they make cognition process continuous and ongoing. There is a transition from one cognition stage to another one. The notion is cognized as real idea in a dialectical movement.

Idealistic understanding of cognition process should not disparage Hegel's logics. There is a need to have notions in movement, to see the movement of reality, as the idea itself presents dialectics. An essence of idea is contemplating and contemplation. An absolute idea freedom is that it transits into life and allows life to shine in it as a final cognition but it also produces the first notion and otherness, spontaneous idea as its visibility (*Widerschein*) in the absolute truth (Hegel, 1974).

It is difficult to wait materialistic solution of cognition problems, but Hegel's dialectical problem understanding should be taken into account. Speculative method has a methodological power. Materialistic understanding of Hegel's concept in our study makes it possible to say that old-new relations in the development of scientific knowledge are solved dialectically. The old does not disappear completely, but contradicting with the new it is destroyed on a new stage. Analytical and synthetical cognition methods help to do it. Every cognition stage is higher than the previous one. The validity of this theory is proved with science logics by this philosopher.

An abstract-theoretical approach dominated in Hegel's works does not exclude social conditions in the formation and development of cognition processes in concrete historical moments. Being a director of Nuremberg school he says that government wisdom is in putting the old in new relations to the single and also in keeping the existed, changing and renovating it (Hegel, 1970). The meaning of these words does not put the old away, but put it in the conditions when it transforms, changes and renovates.

Old schools are based on the previous experience and the connection with experience does not exclude the introduction of something new and experimental.

It is not enough to copy old principles and the content in educational process for progress. It is necessary to accept the old and to feel the atmosphere which created it. A man who does not know predecessors' works lives not knowing the beauty. The educational element which makes us closer to ancient culture affects and develops human soul (Hegel, 1970).

Previous achievements develop and build intellect and soul abilities. Soul content having values and interest in itself and for itself creates the substantial core which produces self-education, prudence and the presence of mind. It converts the soul into a

core which has its value and absolute aim; it creates the basis for universe availability it should exist in all social classes (Dewey, 2003). The philosopher calls spiritual values created by previous generations “gold apples in silver plates”.

Differentiating religion and science, Hegel expresses his relation to the past in the content of scientific knowledge in a lapidary form. Science has richer content created by cognizer’s activities for centuries. The content is presented not as the past presented in knowledge and giving us facts/material for memory and wit, but it is cognition which stimulates soul and satisfies our needs in the truth (Hegel, 1974).

### 3. Conclusion

Thus, relations to the achievements of the past in cognition process are formed clearly in Hegel’s works. These are perception, critical analysis and further qualitative development. All these processes are realized in cognizer’s activities.

The old is the basis for building a new science, but not all from the past is suitable, that is why difficult and tedious work to select something valuable and progressive is necessary. Selected scientific material undergoes changes, one part of it throws away and another one is included in new research systems without changes. Innovations in activities of science subject are explained by high style of scientific thinking, scientist’s activity, social and cultural factors. The depth and completeness of understanding scientific values and the stage of their involvement depend on not a transcendental apperception, but readiness of subjective and objective factors for innovations. Thus, it depends on necessary social factors for scientific activity and also high professional, civil subject position of scientific activity.

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