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Procedia - Social and Behavioral Sciences 166 (2015) 655 – 659

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**Procedia**  
Social and Behavioral Sciences

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International Conference on Research Paradigms Transformation in Social Sciences 2014

## Bacon's philosophical theory of human-nature relations

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### Abstract

The study is designed to investigate the problem of today environmental situation. The authors believe that the problem can be solved with understanding of key problems formed in the past. The aim of the study is to perform F. Bacon's item analysis taking into account Human-Nature relations. Methods of investigation are the logical-historical and system analysis are carried out.

The viewpoint an empiric materialist F. Bacon is shown. He considers that a man is a nature conqueror. But he also thinks that a man is a nature servant and expounder. Characteristics of three philosophic cognition components: God, nature and a man is given. According to this approach, philosophy has branches - a theory of God, a theory of nature and a theory of man. Thus, F. Bacon distinguishes "first philosophy", natural philosophy and naturphilosophy. Philosopher's viewpoint about the role of scientific community in social government and nature investigation is examined. F. Bacon's efforts to harmonize relations in the system "Human – Nature" are explained and analyzed. The idea incompleteness that stages of nature investigation depend on social and cultural factors is emphasized.

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Peer-review under responsibility of Tomsk Polytechnic University.

*Keywords:* human, nature, connection, harmony, philosophy, mythology, God, activities, subject, object

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### 1. Introduction

Modern anthropological influence on nature makes scientists go back to classical scholars' papers which describe relationship processes between a human being and nature. Different ecological problems are investigated in scientific literature. In this study the following problems are highlighted: problems of general ecology as a science (Bennett et al., 1978; Bews, 1935; Vernadskii, 1978; Odum, 1975; Rejsmers, 1994; Hösle, 1993); problems of noospheric thinking formation (Vernadskii, 1988<sup>a</sup>; Moiseev, 1993; Moiseev, 1990; Teilhard de Chardin, 1994; Teilhard de Chardin, 1987); natural recourses usage and ecological crisis overcoming (Attaly, 1993; Vernadskii, 1988<sup>b</sup>; Kommoner, 1974; Krut' et al., 1988; Moiseev, 1985; Pechchej, 1985; Pimentel et al., 1980; Robinson, 1980; Simons, 1977; Zimmermann, 1988).

However, there is every reason to believe that the great number of scientific papers on these problems does not remove the importance of philosophical understanding of human - nature relationships. That is why it is very

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important to turn to F. Bacon's papers. He focused his attention on the negative and positive human effects on nature from empirical materialism viewpoint.

## 2. Discussion

F. Bacon was one of the representatives of the late Renaissance, his philosophical thoughts are the basis for theorist generations. He was a reformer on his beliefs and "a nunciator of scientific revolution" (Krut' et al., 1988).

In the system "Human - Nature" F. Bacon does not have finite solution. On one hand he considers that a man is a nature conqueror. Verulamian sees his role in banding people together to fight against nature. Nature must be captured and the boundaries of human power must be pushed. From the other hand, a man is a nature servant and expounder. But here is F. Bacon's empiricism. A man plays the role of a nature expounder within the boundaries covered not by thought but by actions. A man does not know more above this, so there is a human dependence on nature and nature boundaries in man's consciousness are determined by his actions (Bacon, 1971<sup>a</sup>).

Further, F. Bacon accepts spontaneous nature streaming, when it is free-living and accomplishes its own task (here we speak about the history of celestial bodies, the Earth, sea, etc). But he is more interested in the history of nature, especially when art and human actions destroy its normal state, influence on it and form it. (Bacon, 1971<sup>a</sup>). In his actions a man connects and separates nature bodies. Everything else is done by nature independently.

His philosophical content includes three objects of cognition: God, nature and a man. Each of these objects has a specific application sphere and its own stimulation techniques. Nature influences directly on intelligence, God influences on it with refracted rays through inadequate sphere (in other words, through creation), and a man is a subject and an object of cognitive process, he influences on intelligence independently with refracted rays. According to such division, there are a theory of God, a theory of nature and a theory of man in philosophy. These are branches of one science. Thus there is a necessity to understand a common science – a mother of all sciences. And such a science, from F. Bacon's viewpoint, is "the first philosophy" or "wisdom" (Bacon, 1971<sup>b</sup>).

F. Bacon has clearly defined functions of the first philosophy considering that human knowledge is rather confused or as he says it is a mash, unconscious quantity of scientific knowledge from different branches of science: logics, natural theology, some branches of physics, etc. All this should be arranged. Thus, the first philosophy should accumulate axioms and principles of many sciences. In this regard such a science would show the singleness of nature. From other point, the first philosophy or wisdom should investigate attendant quality of the existing, which F. Bacon calls *transcendences*, for example: similar and diverse, big and small, etc. But this study should be based not on the rules of eloquence but on the laws of nature (Bacon, 1971<sup>b</sup>).

F. Bacon divides natural philosophy into theoretical and practical philosophy, as the first one uses the method of investigation from experience to axioms and the second one uses – from common axioms to new discoveries. According to this, Verulamianian divides the knowledge of nature into theoretical and practical. One of them investigates nature resources and the other one modifies nature.

F. Bacon's natural philosophical study is based on analytical method, giving priority to Democritus's philosophical principles. Verulamianian subordinates scientific knowledge to living needs and practice. The common task of all sciences is to increase human's dominion over nature. One of the most serious mistakes made by people towards the science is a diversion from its ultimate objective. Some scientists think that science should satisfy their curiosity, some find pleasure in it, others assert themselves through science, some feel a competitive joy of victory, others want to receive material benefits. According to F. Bacon, the connection of theory and practice, like the connection of the earth and the sky to protect human lives and help him, must be the goal of these both philosophies without contentless and futile but saving only firm and productive to make science not a hetaera acting for pleasure not as a covetousness's maid but as a goodwife giving birth, joy and moral comforting (Bacon, 1971<sup>b</sup>). In F. Bacon's words the meaning of effective anthropologism exposes. The science should strengthen man's positions, power and intellectual abilities. Preferring activity approach in research, F. Bacon warned that axioms should not prevail over discoveries. Nature is so rich that it leaves all subtleties of arguments behind. Besides, the axioms, used at F. Bacon's time, were imperfect, they stemmed from poor and simple experiments. Thus, studying nature we deal with two

cognition types: “The cognition that is used for nature studying will be named as *nature prescience*, as it is hasty and immature. But the cognition properly imported from things is named as *nature interpretation*” (Bacon, 1972<sup>a</sup>).

Thus, primary cognition of nature is a false, superficial and shallow knowledge. Further investigation characterized by deep understanding is a nature interpretation. Highlighting the problem of science perversion, F. Bacon distinguishes: intemperate preference of one of the extremes (new or old); doubts about discovering something new; intellect devotion, etc. In our study the third comment is important concerning intelligence overindulgence. This way of investigation is dangerous, as a scientist does not take into consideration scientific experiment and as Verulamian says that the scientist stays just in the fog of his thoughts and imaginations. F. Bacon agrees with Heraclitus, who polemizes with intellectualists encouraged to seek the truth not in microcosmos but in the Universe. F. Bacon’s opponents reject the nature laws and do not want to learn from production of God. Staging nature understanding gives the possibilities for deeper understanding (Bacon, 1971<sup>b</sup>).

The researcher's logic leads Verulamian to the thoughts about new science which can solve many problems. In a controversy with philosophers of a new as well as an old Academy, who use the principle of catalepsy (*akatalepsia*), or in other words, the principle of thing unknowability, F. Bacon introduces to the "Novum Organum" the notion *avcalepsia*, which means thing knowledgeability. Human feelings with dynamic activities can present sufficient knowledge. It is achieved by experiment actions without minimizing intelligence importance. F. Bacon’s task is an intellect help to find possibilities for clearing up secrets of nature. Verulamian tries to create a new science which would make intelligence an adequate material substance. This science should find a special art of instruction and leading up.

The first part of the science is called “scientific experience”, the second one is “nature interpretation or "Novum Organum". To know things is possible in three ways: either going on the touch in the dark, either taking somebody’s hand or going free lightning your own way. In each way of movement there is an experiment. In the first way the experiment is used without system and order, in the second way it is done with some order and direction, and in the third way there is a sequence and systemacity in the experiment application (Bacon, 1971<sup>b</sup>).

Thus, F. Bacon thinks in scientific work that exercise and mind should merge in scientific art. This line of reasoning is given in F. Bacon’s social-utopian story “The New Atlantis”. The main aim of his work is an approval of science and technology development. This is a great project. At the same time in F. Bacon’s work we can see that problem solution and nature subdual depend on social needs. F. Bacon has worked on these questions for a long time. In his work “About science advantages and augmentation” (1605) investigating science importance for humanity, addressing to King James, a philosopher suggests the strategy for science government and development and for attitude to scientist activity, emphasizing the importance of officer sequence work in solving problem. From F. Bacon’s viewpoint, most of ruler’s activities are focused on the glorification and perpetuation of their names, but not on the science. All efforts should be focused on scientific institutions, books and scientists. His further arguments are very close to today’s science condition, especially in Russia. F. Bacon considers that building new scientific institutions leads to building construction, allocation of funds, approval of regulations and foundation of libraries with publishing development.

Rulers should reward teachers, lecturers and scientists for their scientific work.

F. Bacon opposes low poor salary of general and special disciplines teachers. Academic work cannot solve everyday problems, it should supply science development in ages. Thus, rulers should create such working environment and reward when scientists could work without problems. Teachers are keepers and guardians of science development. Vergil (Vergilius) considers that poor salary can lead to poor science development (Bacon, 1971<sup>b</sup>).

Unrealized F. Bacon’s ideas about the place, role and meaning of science are presented in the classification of scientific individuals. We do not have a task to analyze inhabitants’ activities, behavior and traditions existed in Bensalem island, visited by travelers in the story "Novum Organum". We want to show the activity of Ordo or Society called “Solomon house”. The aim of this institution is the study of God creations, in other words, the study of natural history, history of humanity and nature. The father of Solomon house said that the aim of their society was the understanding of reasons and latent forces and increasing of human power over nature (Bacon, 1972<sup>b</sup>).

Academic work of scientists lived Bensalem island is differentiated and it allows to study main spheres of society and nature. These are production and processing of minerals, development of air and water areas, earth research, selective breeding of animals and plants, park and nature reserve creation, usage of different kinds of energy (wind, sun, water), creating different means of transport, slowing down aging and organism rejuvenation, etc. In general we consider that this scientific society can be called scientific and industrial. A man controls organic nature as well as inorganic nature. The scientific foresight allowed F. Bacon predicting some processes and technologies which were realized in the science of that time and of the future.

Thus, F. Bacon's philosophy is closely connected with science. However, some elements of his natural philosophy are closely connected with mythological allegories.

Among mythological Gods Pan had more chthonic features, he was a creature personifying wild natural earth power and Underworld. One of the characteristic features of chthonian Gods was beast-likeness, but fundamentally they were closer to a man in and of himself. As F. Bacon noted, Pan was a god of nature, god of hunting. Any action of nature, any movement, any development is nothing but hunting. Indeed, art sciences hunt for their creatures, people communities pursue their goals and generally all creatures are hunting either for food or satisfaction using their skills and knowledge (Bacon, 1972<sup>o</sup>).

The image of Pan symbolizes the connection between a man and nature, myth parabolism is clear. His upper body is human and his lower body is animal. This image shows the complexity and ambiguity of natural phenomena. A human nature combines different features, such as human, animal, vegetable ones. This is a combination of inferior and higher nature. But F. Bacon suggests that no nature is a simple one.

The unity of inferior and higher nature leads to such state as harmony. It was one of the main questions of worldview in ancient mythology and philosophy. Verulamian draws his attention to this feature in Pan's image. Pan holds the crummock in his hand (stick to catch hares) which is straight along the length curved like a hook at the top. It is interpreted like a difficult and complicated way of nature. Here F. Bacon uses dialectics to understand such difficult and controversial processes of development and movement. But Pan also holds the pan flute consisted of seven reeds. The flute symbolizes nature consonance, things harmony or consent interwoven with discord resulted from the movement of seven planets (Bacon, 1972<sup>o</sup>).

Thus, the movement of nature is very difficult and complicated and not always in harmony and consent. It concerned nature quite as much the processes of perceiving nature which can be succeed by hard work. Here F. Bacon addresses to his conceptual issue about the role of experimental activity. For this he uses the myth that many of the gods looked for Ceres (Demeter), the goddess of the harvest, but only Pan found her. According to F. Bacon the meaning of this allegory is that we should not expect inventions useful for practical life from philosophers carried away by abstraction. Such invention can be done by Pan from wise experiment and overall nature understanding (Bacon, 1972<sup>o</sup>). However, we should remember that together with positive result there is an Echo as breezy theories of the nature of things.

Thus, F. Bacon is interested in the harmonization of man and nature relations, but his philosophy has no systemacity. He is not interested in the balance of a man and nature as well as the problems of society and nature specificity and mechanisms of their relations. There is an attempt to detach the problem of nature conquest by a man. Here anthropocentric Verulamian's philosophy foundations are very strong. A man from all parts of the Universe is the most compound and complex. Hence, there are all reasons to name a man as a little universe. From the point of final causes, a man is a center of the universe (Bacon, 1972<sup>o</sup>). That is examined at the level of utterly large category - the Universe, but not natural environment included in immediate human consciousness and activity. Stages of nature development in the dependence of specific social and cultural factors are not examined.

At the same time there is a define progress. F. Bacon has found discord, human alienation from nature in human-nature relations. On the one hand, the philosopher sees the goal and action of human power in an ability to produce new nature, to inform a body about it, to discover the form and origin of this nature. On the other hand a man watches the nature from a distance paying much attention to general subjects. But it would be more benefits if a man paid more attention to reality. Thus, in cognitive process a man would go closer to the object of cognition but he would

also strengthen and develop organs of perception and thinking. Ultimately human art and labor do not rule the nature and fate but he completely obeys them (Bacon, 1971<sup>b</sup>).

### 3. Conclusion

F. Bacon's philosophy was a new understanding of nature based on scientific methods of research. His empiric method had a great influence on the formation of spirituality. His transition from theological understanding of nature to efficient anthropologism led to the development of harmonic concepts in natural science. Verulamian's philosophy has incompleteness and contradiction, but it has become the basis of practical orientation of modern science with its humanistic tendencies.

### Acknowledgements

This research was financially supported by National Research Tomsk Polytechnic University.

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