

Relativism in Geomorphology

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Extended Abstract

Introduction

One of the most important issues in development of any scientific discipline including geomorphology is introduction of new viewpoints and special conceptualization. Introduction of relativism in philosophy, language and sociology has brought about deep evolutions in the epistemology of the research methodology in these sciences. Although this viewpoint was already introduced in geomorphology by the American scientist G.K. Gilbert one hundred and thirty years ago, temporal conditions did not let the development and understanding of the conceptions for others. Recognition of Gilbert's views and its comparison with relativism concepts in this age can familiarize us with Gilbert's thought and the evolutions it made in relativism concept. Besides, it can prevent us from considering Gilbert's relativism to be in parallel with many concepts introduced by others.

The purpose of this article is to understand the depth of Gilbert's transcendental meditation and the difference of his opinion with the dominant scientific thinking in the era of Davis. Obviously, to know the angles such insights can enrich new ways in the epistemological and theoretical literature of the geomorphology.

Materials and Methods

To recognize the concept of Relativism and compare it with Gilbert's opinion, it is necessary to check the works of prominent persons in different fields of knowledge on this subject. After

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theoretical basic review of the relativism, four characters in this field were selected with quite clear and obvious ideas. They were Hans Gadamer (Hermeneutics), Albert Einstein (Physics), Ludwig Bertalanffy (Systems), and Mulla Sadra (Mysticism and illumination). Then, their original texts about the concept of the relativism were separated and their views were analyzed. Finally, we compared them with Gilbert's opinion and explained their differences and similarities.

Results and Discussion

The relativism has not been expressed in the fields of knowledge and methodology nor even as a skill in a common concept. In general, it can be mentioned in ten whole meanings. Some try to limit it to philosophical issues and others treat it as a method.

A. Relativism in the view of Sophists

In this view of the relativism, the principle of non-contradiction, diverse readings and multi-voice are recognized and it is based on denying the existence of truth and fact.

B. Hermeneutics

Every commentator understands the effect of his/her experiences different from those of the others. In other words, understanding and interpretation is a function of semantic horizon of the commentator, and this is nothing except "Relativism" in understanding.

C. Sapir-Whorf's Relativism

This theory explains another aspect of the relativism. Hence, people do not take an equal understanding from a single external mental phenomenon, unless they have similar Language background.

C. Scientific Relativism (Einstein)

Concepts such as time, place and gravity are considered different based on the physical condition they were considered. They are regarded to have a variant nature. In other words, based on this theory, there is no absolute time, and consequently, nor any absolute temporal coincidence. Moreover, time is not the same in the two systems that are not connected to each other.

D. Relativism systemic in epistemology

The external existence of phenomena and their objectivity are authenticated. First special totality is supposed as the system. Then, each of the elements is evaluated with the other elements or with the whole system.

Q. Allometric

In this view, efforts of the researcher are focused on the understanding of the relations of these phenomena with each other.

E. Divine Relativism

This Relativism expresses how a phenomenon and its emanation are effective on the observer's understanding.

F. Genette relativism

This Relativism expresses that a researcher is not affected by the recognition phenomenon.

G. Relativism in scale

This technique considers the view point of cognition within the framework of special relativity and uses it to describe the reality of object.

J. Gilbert's of Relativism in Geomorphology

The understanding of a phenomenon depends on the observer and his/her thought, and the cognition cannot be treated as rigid and absolute matter. According to the researcher's previous take of science, his/her conclusion about a phenomenon is different.

Comparison between the 9 relativism trends and Gilbert's relativism has resulted in the following findings (similarities and differences between each trend and Gilbert's relativism):

Comparison between Sophistēs' relativism and Gilbert's relativism

- Human's thought background is the criterion for knowledge.
- They acknowledge objective and experimental realities.

Comparison between hermeneutists' relativism and Gilbert's relativism

- Introduction of "mental background" and researcher "outcome" in the knowledge of phenomena is emphasized.

Comparison between Sapir-Whorf's relativism and Gilbert's relativism

- Researcher "outcome" is influential on the knowledge of phenomena.

Comparison between scientific relativism and Gilbert's relativism

- Different objective data derived from a single phenomenon result in the relativism in knowledge.

Comparison between relativism in systemic epistemology and Gilbert's relativism

- Relationship between the phenomena is by its own an expression of relativism.
- They also believe in the denial of the necessity of structure in the phenomena.

Comparison between relativism in Allometry and Gilbert's relativism

- Relationship between phenomena is apart from the supervisor's mind.

Comparison between Sacred relativism and Gilbert's relativism

- Part of the knowledge in the person who knows is related to what is known.

Comparison between Genetic relativism and Gilbert's relativism

- In Gilbert's viewpoint, knowledge depends on the researcher.

Comparison between Relativism in scale and Gilbert's relativism

- In Gilbert's view, relativism is not digital and numerical.

Conclusion:

The results indicated that:

- Gilbert is the first geomorphologist who has applied the concept of relativism transcendently and deeply in his methodology 130 years ago (1886).
- Ten independent concepts of epistemic relativism have been used in various systems.

Keywords: *geomorphology, Gilbert, relativism, relativity, systems.*