

Postpositivism, Positivist and Engineering

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Abstract:- The positivism paradigm refers to the context of objectivity to describe a reality that which exists. The society handles formal from the era of the Greeks and physics scientific and philosophical knowledge as scientific discipline is relatively short.

Keywords:- positivism, post positivism, epistemology, transdisciplinary.

I. INTRODUCTION

This work corresponds to a cycle of discussions of the Chair in qualitative research of doctorate in science education from the Universidad Dr. Rafael Belloso Chacín. It includes an affirmative analysis of positivism as the philosophical foundation of the engineering method for the undertaking of projects, whereas in this vision of the engineer in his praxis and the analytic explanation of experiences planned, in contrast to the pots positivism and its relationship with the social sciences. Technology is born and is strengthened within the industrial revolution, and is scientific when the new discoveries of science are applied in it for welfare of mankind, in the majority of casesthe engineering method and its process [1] for the undertaking of projects, whereas in this vision of the engineer in his praxis and the analytic explanation of experiences planned, in contrast to the pots positivism and its relationship with the social sciences. and . It is important to then address a paradigmatic discussion by defining the epistemological position that conceptualizes the natural work of the technological world in our era. Therefore, it is necessary to unify the criteria of positivism and the post positivism through the transdisciplinary understanding changes and technological contributions of the 21st century.

II. DEVELOPMENT

The positivist paradigm refers to the context of objectivity to describe a reality that which exists and can, part of it, be really observed through the senses, our cognitive systems in partial or total way, depending on the needs. It is important to understand that human beings (Homo sapiens) round this planet as a species for thirty thousand years; however have traces of civilizations just four thousand years. In this sense the society handles formal from the era of the Greeks and physics scientific and philosophical knowledge as scientific discipline is relatively short with respect to the known civilizations. In this sense the scientific contributions of physics as a science have allowed defining the spatial reality that surrounds us and instances of knowledge that have transformed humanity to undertake. The positivist paradigm, in the praxis of the technologist has not changed at the dawn of the new Millennium; Although the level of new philosophical paradigms that were born in the second decade of the last century, applications have not gone beyond that in dialectic speculations; Nevertheless it is the post positivism as an emerging paradigm based on assumptions different and opposed to positivism. Technology is born and is strengthened within the industrial revolution [2], and is scientific when the new discoveries of science are applied in it for welfare of mankind, in the majority of cases. The control and eradication of diseases through new methods and medications (antibiotics); the construction of large buildings, the advent of computers, telecommunications, technological convergence and other large works have been built and continue building allude to the positivist method in the technological world.

Without however it must be emphasized that in the field of social and humanistic sciences nature of the variables not always can be defined through demonstrations and static laws or budgets of Supreme objectivity [3]. This is how emerges a new paradigmatic view that allows you to insert an interaction between the Knower and the known object. It is important to then address a paradigmatic discussion by defining the epistemological position that conceptualizes the natural task in the technological world; the specific practice of life related disciplinary knowledge of engineering, i.e. your scholastic training. To ensure the budget special epistemic other paradigms can rate since the vision of the researcher recognizes the application of particular alternative models in other sciences that can be applied on certain problems of their own discipline. Assuming that physics is one of the most objective and that this has changed his praxis and vision epistemic to be able to relate the phenomena inherent to the imperceptibility of the senses of man is quite daring this perception when for

example by post positivism philosophers, the 787 Dreamliner was developed under the positivist paradigm and flight tests operation and current failures have been developed with methods of observation always. In fact studies of classical thermodynamics are based on the continuum (continuous or uniform system) to highlight statistically uniform behavior of particles in a given State, allowing in this way to conclude specific applications on different systems. It is well known that the natural phenomena of climate science cannot work completely in the continuum, but developments of physics and mathematics aided by computer have improved budgets of knowledge in these areas; positivistic assumptions that have improved the living conditions of human beings.

That is his praxis and continuous measurement for technologists (engineers), the application of scientific knowledge is its method, how to approach a different paradigm, is very simple, noting the interdisciplinary environment, managing interdisciplinary and linking bridges between them for the solution of common problems [2]. Not to say that they left tackle the epistemological paradigms of each discipline, only that interdisciplinary requires the joint action of different paradigms. In the case of teaching engineers, their technological endowment is involved as a way to research processes, but when research in the teaching of engineering processes communication with social sciences ties are released to address paradigms appropriate to the solution of problems of University teaching. In this sense [3], establishes that the investigation of problems of different dimensions requires application of oriented trans-disciplinary scientists develop links through the dialogue between science and society; this is an advent of positivism as emerging method [6]. Way provided the post positivism paradigm involves the interdisciplinary as introductory of various branches of knowledge to interact in their practice allowing a multiplicity as introductory of various branches of knowledge to interact in their practice allowing a multiplicity of voices in the solution of the problems achieving consensus of validity through intersubjectivity [7], being the replacement of objectivity. In considering [8] which defines the nature of engineering in four large action, these being the social sciences and the engineer as a sociologist, basic sciences and engineer as a scientist, design and engineer as designer and their practical realization and its field engineer concrete engineer Mission in all of the global context. These dimensions in its environment show the engineer in a trans-disciplinary practice of links with other sciences for the total use of his wit, in this sense considering the epistemological nature of these dimensions note the dominance of positivism and constructivism in his work and philosophical sense denoting that its nature is inert despite the time despite the trend.

III. CONCLUSION

To conclude it is necessary reconsider that the vision of the engineer in the current environment of the 20th century will be the keep your method and praxis in its disciplinary environment, i.e., the positivist paradigm and link vessels communicating to other disciplines (transdiscipline) when required by the solution of a problem. The necessary coexistence of epistemologically distinct scientific disciplines but mainly with a coexistence altogether which is vital for the development of humanity that hovers within the process of globalization and that is not an exception in the growth of a society is this then, scientifically strong. The dimensions proposed by [8] show the engineer in a trans-disciplinary practice of linking to engineer with other disciplines of scientific knowledge for the total use of his practice and his huge liability for make society a better human, in this sense considering these dimensions epistemological nature note the dominance of positivism and constructivism in his work and philosophical sense that defines it and reflects along of the time.

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