The Role of Revelation in Science

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ABSTRACT
Alexandru C. V. Ceapa suggested in his work published here posthumously that contemporary physicists deny the role of Divine revelation in the making of modern physics and yet Einstein's derivation of the Lorentz transformation in his 1905 paper on Special Theory of Relativity (“STR”) and his later disregarding of it were the most striking proof that revelation played an essential role in the making of STR. Ceapa’s work challenges all truth seekers to think deeply about the origin of scientific insight and creativity and examine closely the ontological basis of the pillars of modern physics, e.g., Einstein’s STR. If doing so shall assist us move “toward an exciting rebuilding of modern physics” as Ceapa hoped, he had not fought in vain and his work should not be forgotten.

Key Words: revelation, insight, creativity, science, Einstein, special theory of relativity.

This focus issue features the life-long work of Romanian physicist Alexandru C. V. Ceapa. I encountered Ceapa’s work through the Internet and, when I attempted to contact him recently, I learned that he had passed away but found two good Samaritans, Yiannis Haranas and Isabel Gaju, who are spreading Ceapa’s work in their own ways (1, 2). Indeed, both have agreed to contribute to this focus issue (3, 4). As readers shall learn from their respective articles, Ceapa dedicated his life to the fundamental problems in physics, overcame difficult circumstances during his life on Earth and passed away in May, 2006 at the age of 61.

The idea that scientific insight or creativity is due to revelation by GOD is hardly new at all. Indeed, if GOD created the Universe and everything in it, one can only attribute one’s insight and creativity to the ultimate source as revelation (see, e.g., 5-7). In this editorial, I will focus my remarks on Ceapa’s actual messages to the physics communities and the world at large.

In the Forward to his work, Ceapa urged fellow physicists to have a correct attitude toward revelation, identify, like classical physicists, the physical information incorporated in the underlying equations, and lay out rationale for their work so as to contribute to the true advancement of science. According to Ceapa, in deducing the Lorentz transformation in his 1905 paper on STR, Einstein turned parts of revealed knowledge without being aware of dealing with it into rational knowledge indicating that Einstein’s genius was actually far more impressive than that being celebrated in the World Year of Physics 2005. Unfortunately, Einstein’s jumps over explanatory steps in his 1905 paper had hidden his distinguished performance. Then, in the Prologue to his work, Ceapa drawed an interesting diagram to illustrate the definition and general attitude toward revelations. He even pointed out the key contributors in his opinion to the crisis of modern physics due to their unawareness or attitude on revealed knowledge.
To make his case in detail, Ceapa next presented to the readers his definitions, working hypothesis & operational method which allowed him to obtain later time-dependent coordinate transformations that are complementary to those already known as spatial translations and rotations. Ceapa then discussed abstract coordinate systems at absolute rest, described time-dependent coordinate transformations complementary to those already known as spatial translations and rotations, and showed that standard Lorentz transformation is a complementary time-dependent coordinate transformation. Ceapa then applied the Lorentz transformation as a complementary time-dependent coordinate transformation to STR and obtained results warranting Einstein’s decisions to manipulate some equations that led to the standard Lorentz transformation in his 1905 paper on STR.

Ceapa then suggested that Einstein’s derivation of the Lorentz transformation in his 1905 paper on STR and his later disregarding of it were the most striking proof that revelation played an essential role in the making of STR. Unfortunately, according to Ceapa, the hint of revelation in science was not typically followed by laying out a rationale of the work containing revealed knowledge which in turn hindered human progress.

Next, Ceapa explored the meaning of relativistic quantum mechanics. He hinted that the relativistic energy-momentum relationship is far more subtle than it seems to be at a first sight. He pointed out that without a clear physical role and meaning associated with this relationship, the Dirac matrices in the Dirac equation lack proper interpretation. Therefore, physicists should search for genuine physical information underlying the equations such as the Dirac equation in relativistic quantum mechanics. Ceapa suggested that the Dirac wavefunction contain in its components subquantum information on the constituents of the Dirac particle responsible for the undulatory phenomenon. Further, Ceapa stated that in the standard model of particle physics, the relativistic field theory disregards the essential subquantum information. He then constructed a model of elementary particle consisting of two systems of subquantum particles spinning in opposite directions and discussed this subquantum model, Caianiello’s phase space, space-time geometry & the ether.

Ceapa concluded his work with the statement that, by disclosing the objective reality behind Einstein’s manipulation of equations in his 1905 paper on STR, he showed for the first time a rationale for the revealed knowledge. Ceapa further concluded that it is the rationale for the revealed knowledge that scientists should seek and describe in their work in order to bring true advancement in science and religion are not antinomies as they seem to be in the mind of modern scientists.

In the Epilogue to his work, Ceapa urged the leading physicists to change their attitude toward the role played by Divine revelation in science, identify the causes of the crisis in modern physics and eradicate said causes instead of hypermathematizing with little physical information or understanding on one hand and launching big and expensive projects which have produced feeble experimental results so far on the other hand.

Finally, I caution the readers that this editorial merely serves as an introduction to Ceapa’s work published herein posthumously and should not be construed as a formal endorsement of the same by this journal. Ultimately, it is each truth seeker’s own responsibility to evaluate and judge Ceapa’s work and his contribution toward the advancement of modern physics. However, these cautious words notwithstanding, it is my opinion that Ceapa was a genuine truth seeker and did valuable work which is worthy the pages of this journal. Ceapa’s work challenges all truth seekers to think deeply about the origin of scientific insight and creativity and examine closely the ontological basis of the pillars of
modern physics, e.g., Einstein’s STR. If doing so shall assist us move “toward an exciting rebuilding of modern physics” as Ceapa hoped, he had not fought in vain and his work should not be forgotten.

References