

Review of: "Energy May Be the Only Unique, Distinct, and Independent Entity in Nature"

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In physics, quantities with different dimensions of different entities are known, but they can be combined to form the laws of physics or become similar quantities. Therefore, the statement that the `electric charge is the same as the energy` or that the mass of the energy, which the author gave in the abstract of the article, is not physically correct. Even in Einstein's equation of special relativity, in the explanation of $E=mc^2$ and the interpretation of this relationship, it is generally said that mass is equivalent to energy and equality is achieved by the square of the speed of light. Even in mechanics, we know that the physical dimension of torque is the same as energy, but we all know that the two concepts are different. One is a vector and the other is a scalar, although the torque of the force can be a factor of energy production, such as the force of any type of electric, gravitational, nuclear, etc. Conversely, energy can also lead to the production of torque of the force. In this sense, in my opinion, this article has not been written as expertly, and it has many conceptual and methodological flaws. If we accept that every quantity that is only related to energy is energy itself, no law in physics will stand, and it will not be possible to give order and discipline to the exact world of physics, and it will be incompetent to interpret and explain physical phenomena. However, in conventional physics, it is very obvious that qualitatively all physical quantities can be related to energy, like the examples I mentioned in the text above. That is, the electric charge due to the electric potential energy, the mass due to the gravitational potential energy, and such things, but in a quantitative sense, it cannot be clearly said that the electric charge is energy (or a form of energy). If the respected author is referring to a qualitative relationship, then the sentences of the article should be written clearly, and in this case, the article will not have scientific novelty, and therefore it will not be an important article. If the author means there is a quantitative equality between charge and energy (which does not appear in the body of the article), that is a very deep and fundamental problem. However, according to the comments above, for both cases, the article lacks scientific validity. This objection also applies to all the articles written by the author with this attitude and addressed in this review article. Therefore, the author should do a fundamental revision based on the correct attitude of a physicist toward the paper.

Another point that I should mention is that in usual physics, electric charge is introduced as a characteristic of matter regardless of its sign, while the author of this article has considered the sign of electric charge as a distinctive characteristic of matter, theoretically. There is no problem, but only when this hypothesis can solve a problem of current physics that is unable to interpret nature does this additional hypothesis have physical value. Therefore, in the article, it should be stated exactly what the problem is in ordinary physics without differentiating negative charges from positive electric charges, which can be solved by introducing this assumption. By saying this, the validity of the article is more

visible to the readers.