

## Professor Poor Replies

*By way of rebuttal to Professor Henderson's article in the July issue, Professor Poor sends us the following letter:*

Editor of THE FORUM:

According to the ardent proponent of Einstein, "One of the greatest triumphs which relativity has won is the purity and unimpeachableness of the mathematical frame-work upon which it rests." The "frame-work" may indeed be unimpeachable; for, according to the same undoubted authority, it cannot be tested; the assumptions which form the foundation for this frame-work "cannot be proved or disproved." The super-structure, however, — the wings, the porches, the out-buildings, all the additions which now form the so-called generalized theory of relativity, — these are not "unimpeachable"; they contain many weak and sagging timbers. When the relativist attempts to check his theory by astronomical observations, then is he obliged to resort to transformations of doubtful validity, to make use of many approximations. The "impeccable" mathematical development of the relativity formulas, as given by Eddington, contains such statements as:

"It must be remembered that the identification with polar coördinates is only approximate."

"Also the difference (*for the Solar System*) between  $ds$  (*relativity time*) and  $dt$  (*classical time*) is of the order  $10^{-8} ds$ ."

The observations of Mercury, from which Leverrier found the perihelion motion, were made more than fifty years before Einstein was born and are given in the ordinary, uniform time of classical mechanics; the relativity equation expresses the planetary motion in terms of "proper", or variable, relativity time. This fact the relativist ignores: he directly compares the measures made in one kind of units with his calculations made in another. He sees no error in comparing prices quoted in dollars with expenses calculated in francs. The so-called relativity explanation of the observed motion of Mercury is a mathematical illusion; an illusion due to the use of an approximate, or mystical system of time in the relativity equations, and to the failure to transform the "francs" of relativity time into "dollars" of ordinary time.

Henderson's statement in regard to the results of Campbell's eclipse observations, — "For while it is only 17 per cent greater than the Einstein prediction, it is 136 per cent greater than the Newton prediction!" — is disingenuous and an attempt to becloud the issue. For Newton made no prediction: the so-called Newtonian value for light deflection has nothing to do with the validity of the Newtonian law of gravitation. It involves and depends upon an obsolete and discarded theory of light and was first brought out by von Soldner in 1801, a century after the death of Newton. The direct issue is the claim of the relativists that the Einstein theory has been conclusively

proved by these eclipse observations, the claim heralded to the world, that "These results are in exact accord with the requirements of the Einstein theory." This claim, this statement is now known to be erroneous: it is so admitted by Henderson, himself, when he frantically calls upon refraction in the earth's atmosphere to account for the discrepancies between observation and the Einstein prediction, to explain "the deviation of the light-rays in a direction contrary to that predicted by the theory."

It is rather difficult for a mind befogged with "common sense" to grasp the bearing of the cartoon in Henderson's article upon the truth or falsity of the Einstein theory, to understand the exact relation between that author's achievement of "Writing with one hand, describing circles with the other" and the *cause* of the observed bending of light-rays from distant stars.

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