in biology, who had attempted to defend evolution, and who, after being led to her undoing by means of appropriate questions, was utterly discomfited. The audience received the account of this episode with ill-restrained hilarity.

Dr. Riley dwelt to a considerable extent upon the reluctance of Dubois to permit any one to view the remains of Pithecanthropus. From his remarks I would have obtained, did I know no better, the impression that nobody but Dubois had examined the fossils, although I do not think that Dr. Riley stated that that was the case. Dr. Riley then read excerpts from Van Loon's "Story of Mankind," which he represented as a typical book upon evolution, used as a text in certain schools. He interpolated jocular remarks of his (Dr. Riley's) own as he read. Then for comparison, although without the jocular interpolations, he read the account of creation from Genesis. With the account of the creation of man in the image of the Creator ringing in their ears, he left it to his hearers to choose the account they preferred.

Dr. Cantrell took up some of the evidences of inorganic evolution, outlined the evidence from paleontology and dwelt upon the evidence offered by embryological development. He found his audience attentive but unsympathetic, and, in my opinion, he made little headway in getting in touch with them. I should judge that most of his points were lost because his hearers failed to understand what the argument was about. I was impressed with the energy he displayed after having spoken to a succession of rather hostile crowds.

In spite of its rather unsympathetic reception, Dr. Riley attempted to refute Cantrell's evidence from paleontology. He pooh-poohed the claim of definite age for any fossil by pointing out that it could be buried to or sink to the required position. He felt that the tail and teeth of Archaeopteryx were merely one of the creative acts. Dr. Riley then related an anecdote of a dentist who had sent an abnormal tooth to eleven scientists (not named) all of whom had unhesitatingly pronounced it as having come from a huge primitive man. When Dr. Riley divulged the fact that the tooth had been extracted from a little ninety-pound woman, the audience rolled in ecstasy. Dr. Riley also related a story about a tail-rapping dog whose ostensible omniscience had fooled all the scientists. These men, Dr. Riley pointed out, rejected divine revelation, while accepting the message from the tail of a dog!

Seemingly stung a little by Cantrell's charge of inconsistency in the literal account of creation in Genesis, Dr. Riley (*mirabile dictu*) declared that there was "no inharmony between Genesis and geology." He bolstered up this assertion by the remark that the Bible mentions the early creation of "grasses," while it is a well-known fact that the algae were one of the first forms of life! Perhaps the choicest thing of the evening was, however, Dr. Riley's attempted rebuttal of Cantrell's statement that any new idea is subjected to opposition. Cantrell had specifically mentioned railroads. Whereupon Dr. Riley read a passage from the Bible purporting to be a biblical prophecy of railroads! This finesse in rebuttal brought about, in his adherents, a jubilation bordering upon frenzy.

A standing vote of the audience, in the proportion of about ten to one, upheld the resolution that the doctrine of evolution was a fallacy, and should not be taught in the public schools of America. I made no count of the number of people attending, but I would estimate the number to have been about five hundred.

This mixture of misrepresentation, irrelevance and inconsistency was the case against evolution as propounded by a man advertised as being a prominent fundamentalist. These and similar "arguments" may well bring about, in Oregon and other states, laws which forbid the teaching of evolution in the tax-supported schools. People who sit and applaud such puerilities have a lot to learn. Scientists who find themselves, at such a time, out of touch with and therefore distrusted by the mass of the people, with their capital tied up in a position their tenure of which is subject to the caprice or fears of those in authority, may, in my opinion, take certain lessons to heart also.

R. R. HUESTIS

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THE SCIENCE LEAGUE OF AMERICA

WILL you permit me to answer briefly Mr. Cardiff's letter in the issue of SCIENCE for July 31?

The Science League of America was founded in San Francisco last September, for the specific purpose of protecting the teaching of evolution in tax-supported schools and colleges, and of preventing any attempt at a union of church and state by the fundamentalists. It has never claimed any connection with the American Association for the Advancement of Science and the only newspaper item we ever saw making such a mistake was corrected in a two-column editorial.

Nevertheless, the vast majority of our members (including the president and founder) are members of the American Association. We have just completed formation of a national advisory board almost exclusively made up of eminent scientists, members and in many cases fellows of the A. A. A. S. Our relations with the society have been most friendly, and I should like to have the American Association regard us as

an unofficial auxiliary agent by which the provisions of its committee on freedom of science teaching (several members of which are also members of the Science League) may be carried out. Our activities in this direction have been hampered by lack of adequate financial support, but we have already accomplished a good deal.

Mr. Cantrell was sent north as an emergency substitute when I became ill in the course of a series of debates with Dr. Riley, executive secretary of the World's Christian Fundamentalist Association. These debates were arranged for the purpose of proving to the enlightened portion of the populace the strength and menace of fundamentalism on the Pacific Coast; and having achieved this object, no more will be held under our auspices.

I can not believe that Mr. Cantrell made any attempt to reconcile the Bible with evolution, and from my long acquaintance with him I am sure that any newspaper statements to this effect were misrepresentations. We have made every effort in all our spoken and written utterances not to touch on this point, and to approach the question purely from the standpoint of the scientific validity of the theory of evolution and the necessity of preserving the freedom of teachers to make known the findings of science.

Incidentally, I may say that our unwillingness to argue such reconciliation has been the means of losing us many members—notably members of the American Association for the Advancement of Science. For one letter we have received taking the viewpoint of Mr. Cardiff, we have had ten insisting that we come out openly for the reconcilement of Genesis and evolution. This we have not done and shall not do, which makes Mr. Cardiff's attack all the more unfair.

A failure to present our reply to his attack would not only mark an irreparable harm to the Science League, which, poorly supported and against tremendous odds, has struggled for a year to build up a working organization against the fundamentalist attacks on freedom in science teaching; but would also injure materially the whole defense of the teaching of evolution, especially on the Pacific Coast, where the situation is already acute and is daily becoming more so. We are now organized formally in several cities, and have a membership-at-large of scientists and educated laymen in 42 states, D. C. and Hawaii, and in the faculties of 49 colleges and universities. We are just beginning to get to the organization and actively educational stage, and we need the help and the informed counsel of every member of the American Association for the Advancement of Science. In fairness to us and to the cause we represent, will you not be good enough to publish this letter in SCIENCE?

MAYNARD SHIPLEY, *President*

THE NAME N IN COS NT

REFERRING to note under this title in SCIENCE for June 5, the writer wishes to make another suggestion. Since the equation is usually used in physics and engineering to represent harmonic motion of some kind, and the term NT represents the phase of the oscillation, it is seen that the coefficient N represents the radians of phase passed through in unit time. It seems that "phase velocity" would be a phrase that would be nearly self-explanatory and does not lend itself to the criticism of using an old term in a new sense, as would be the case if we adopted the terms, *speed, rapidity, frequency* or *pulsation,* which are already established with other and definite meanings. It appears to the writer that *circular frequency, pulsatance* and *π-frequency* do not convey as much intrinsic meaning as "phase velocity" and are thus less suited from the teacher's standpoint. The fundamental unit of phase is the radian, and time, the second, so the natural unit of phase velocity would be radians per second, entirely in keeping with its use in the expression cos NT. The writer has used the above expression for a number of years in courses in Electrical Engineering and has found no difficulty on the part of the students in grasping the meaning of the expression.

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PROFESSOR ROBINSON'S TRIBUTE TO ASA GRAY

THE tribute to Asa Gray in the July 17, 1925, issue of SCIENCE struck a responsive chord in my heart.

It was my good fortune to meet Asa Gray the first time at a meeting of the American Association for the Advancement of Science, at Dubuque, I think, in 1872. I went to Dubuque to report the meeting for the *Indianapolis Journal.* I, of course, was interested in science and was a member of the association, but this was the first meeting I had ever attended.

During this meeting we had an excursion up the river. A large party of scientific men was walking along the bank, among them Asa Gray. We came across a pool of still water connected with the river, in which there were some beautiful water lilies, very large. Professor Gray pointed to a mass of flowers which were particularly beautiful, growing near the edge, but too far from shore to be reached, and expressed a desire to possess them. I, at that time, was not afraid of getting wet, so I plunged into the pool, plucked the lilies and presented them to him. He expressed to me his very great joy in having them.

I think that this meeting with Asa Gray was the deciding factor in my going to Harvard the next year for a special course in chemistry. Professor Gray be-