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## THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

### THE CONTROVERSY BETWEEN MATERIALISM AND VITALISM: CAN IT BE ENDED?<sup>1</sup>

IN order that this discussion may be profitable, it must rest on an unequivocal meaning of some sort for the words "materialism" and "vitalism." It will, of course, be impossible to give definitions that will be altogether satisfactory to everybody, perhaps to anybody, even the writer. Every one may, however, be counted on to accept some definition *as a basis of the discussion*, if he thinks the question raised is worth discussing at all.

Since my main desire is in behalf of clear thinking and remunerative work in biology to-day, my effort at defining the terms will specially regard present tendencies and methods in our science rather than lexicographical authority and historical usage; though the historical aspect must not be wholly ignored.

By materialism I shall mean the belief that all biological phenomena may be completely explained by referring them to the material elements of which organisms are composed. The term "mechanism" as used to-day, not in practical zoology, but in philosophical biology is, I think, exactly synonymous with materialism. At any rate, I shall consider such to be the case.

It is less easy to formulate a definition of vitalism. I understand the term to mean the belief that organic phenomena can not be fully explained by referring them to the material elements of which organisms are composed, but that some-

<sup>1</sup> Address of the vice-president and chairman of Section F—Zoology.