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PHYSICS AND THE FUTURE¹

By Professor ARTHUR H. COMPTON

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As the conversation turned to the problems faced by our children, my table companion was confident of the future. "During their generation," she asserted, "life can not change as it has for us. Experience will once more be usable as a reliable guide."

If advances in our mode of life are to cease, will it not be the result of a stagnation of our knowledge and techniques? Let us see what present trends indicate with regard to the direction and extent of such future changes.

No better guide can be found to the future than a review of what has happened in the past. Let us accordingly examine the trend of physics through history. Taking the broad view that the science of physics is concerned with the applications as well as

¹ Based on a paper read at Ottawa, June 29, before the American Association for the Advancement of Science.

the principles of mechanics, heat, electricity, etc., it will be seen that such a review must consider also the growth of techniques and inventions, for these embody some of the most important scientific advances.

In his recent book, "Science and the New Humanism," George Sarton has emphasized the fact that science is almost the only aspect of human activity which shows a definite and continuous growth throughout history. Though advances in other fields have occurred, they have come for the most part as a result of development of techniques based on growing science.

We are accustomed to speak of the stone age, the bronze age, the iron age and the machine age. This sequence reviews in quick outline the growth of man with regard to the tools with which he has done his work. Each stage has been ushered in as some inquirer, more persistent or more fortunate than his

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