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CONTENTS

<i>What is Statistics?</i> PROFESSOR EDWIN BIDWELL WILSON	581
<i>What should we do with a Harvey or a Laennec?</i> DR. EUGENE F. DUBOIS	587
<i>Charles Wesley Hargitt:</i> PROFESSOR W. M. SMALLWOOD	588
<i>Scientific Events:</i>	
<i>An Institute of Physico-chemical Biology in Paris; The Bartol Research Foundation; Public Bequests of the late Payne Whitney; Expeditions of the American Museum of Natural History; The Institute of Chemistry at the Pennsylvania State College; The International Soil Congress; Award of the John Scott Medals</i>	589
<i>Scientific Notes and News</i>	592
<i>University and Educational Notes</i>	595
<i>Discussion:</i>	
<i>Selective Reflection in the Far Ultra-violet:</i> DR. A. H. PFUND. <i>Information concerning Summer Plans of American Men of Science:</i> PROFESSOR BURTON E. LIVINGSTON. <i>The Quantitative Theory of Sex:</i> PROFESSOR R. GOLDSCHMIDT. <i>The Origin and Antiquity of Man—a Correction:</i> DR. HENRY FAIRFIELD OSBORN	595
<i>Scientific Apparatus and Laboratory Methods:</i>	
<i>A Clear-view Specimen Dish:</i> DR. S. I. KORNHAUSER. <i>A Starch Test in Photosynthesis Experiments:</i> FRED W. EMERSON	598
<i>Special Articles:</i>	
<i>The Role of Kinoplasm in the Genesis of Vacuoles:</i> PROFESSORS G. W. SCARTH and F. E. LLOYD	599
<i>The Virginia Academy of Science:</i> PROFESSOR E. C. L. MILLER	600
<i>Science News</i>	x

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WHAT IS STATISTICS?¹

WHEN one assembles the phrase: "What is Statistics?" he must expect first to defend his grammar. Should he not ask: "What are statistics?" We do not say "What are Mathematics?" or "What are Kinematics?" Statistics in the original and plural sense means collections of data, first data of the state and by derivation any kind of data. In this sense a statistician is any person who collects such material or who discusses it by any method or without method. It is as though by mathematics we meant collections of mathematical tables or formularies and by a mathematician one who gets the material together. Such usage is justified by custom for statistics and statisticians but not for mathematics or mathematicians. It represents a wide difference of attitude toward the two subjects and the workers in them.

Another difference is this. We see many college books appearing with titles such as "Elements of Statistical Methods," written chiefly by economists. We do not find the book catalogs flooded with texts on "Elements of Mathematical Method" or introduction to biological method. Why? May it not be that mathematicians and biologists, though interested in the technique of their fields of study and instruction, regard those subjects primarily as sciences in which the more important element is really the scientific viewpoint, the principles of the science in question, whereas teachers and writers of texts on statistical method believe that their subject is not a science but a technique? Which group is the wiser, or are mathematics and biology on the one hand and statistics on the other such contrasting entities that each group is wise in its own conceits?

If a great institution like the Rockefeller Institute for Medical Research desires to make outstanding contributions to biology it perforce incorporates with its staff one or more outstanding biologists. It does not consider adequate the purchase of a few mediocre texts on biological technique, to which a staff not especially trained in biology may turn to find the biological method and apply them in its work of advancing medical science. In such institutions we find also trained chemists, not merely reference texts to chemical methods. And this even though every investigator in medical science has a not inconsiderable training in both chemistry and biology. Despite such training, and perhaps because of it, he does not trust himself unaided to extract from the manuals of those

¹ Read at the Rockefeller Institute, April 8, 1927.



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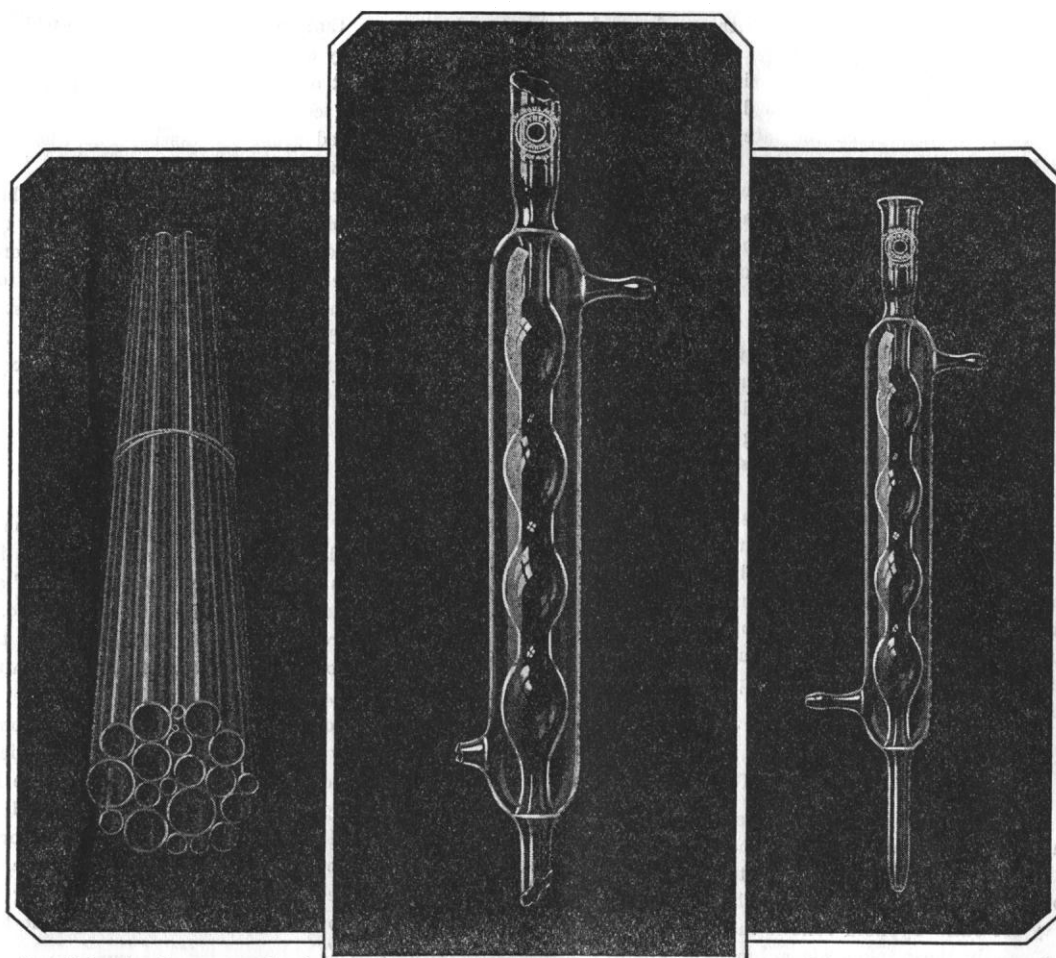
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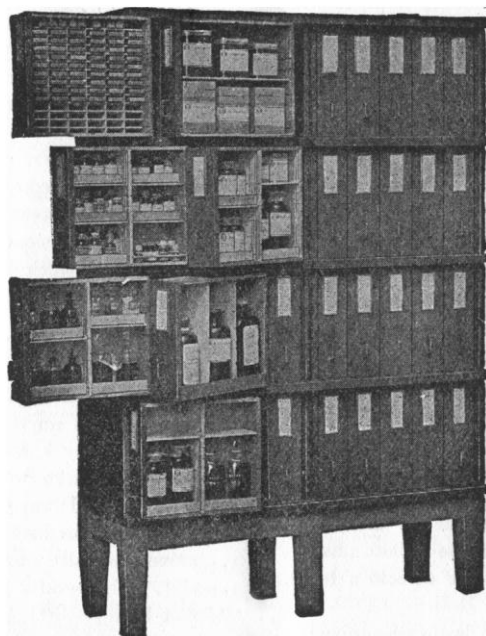
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