seems to me therefore established that it will belong to the not too distant future to isolate and artificially reproduce the most important members of the natural peptones and even the albumoses. But in order to handle a great number of single individuals in the very diverse combinations of the proteins the work of many hands will be necessary. Far more difficult is the problem, naturally, for the true albumins, since, for their reconstruction out of the first products of hydrolysis, wholly new methods must be produced, and even when these principles are established, their application in each separate case will most probably be a tedious work. We may therefore question whether the ultimate success will correspond to the labor spent. That in my opinion depends upon the use which biological research can make of it, and this is again limited by the means by which the synthesis will be effected.

If today, through a lucky accident, by the aid of a violent reaction, e. g., by melting together amino acids in the presence of a dehydrating agent, it should happen that a true protein should be formed, and if it were further possible, which is still more unlikely, that the artificial product could be identified with a natural substance, little for the chemistry of the albuminous substances would be gained thereby, and practically nothing at all for biology.

Such a synthesis I might liken to a traveller who passes through a country on a quick trip, and can tell scarcely anything further about it. The case is entirely different if the synthesis is compelled to go forward step by step and build up the molecule substance by substance, as was pointed out above for the polypeptides. Then it is like a foot traveller who seeks out his way step by step with intense attention, who must try out many roads till he has found the right one. He learns from his long, tiresome wandering not alone to know the geography and topography of the country, but he will also be conversant with the language and customs of its inhabitants. When he has finally reached his goal, he is able to find the right direction in every corner of the country, and if he writes a book about it, other people will be able to do so too.

I might therefore consider it an absolute blessing that synthesis has to devise many new methods of formation, recognition and isolation, and to study accurately hundreds of intermediate products, before it may reach the proteins. For these methods will in the end serve not alone to produce all the proteins of nature and many more still than they have produced; they will presumably also serve to clarify the numerous and important transformation products of protein which play so great a role as ferments, toxines, etc.

We may shortly expect that through thoroughgoing and far extended synthetic work the whole region now still so dark will become a land of chemical culture from which biology can draw a great deal of the help which it needs for the solution of its chemical problems.

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ARCHAEOLOGY

Prehistoric Measuring Cups Studied in Vienna Museum

A PAIR of measuring cups used by some tribe that inhabited the Danube Valley in Bronze Age times, about 2000 years before Christ, have been presented to the National Museum of Lower Austria. So far as can be determined, they represent the only liquid measures of a people in the prehistoric stage of culture that have so far been discovered.

The two earthenware cups were excavated near Vienna about 19 years ago, but did not come into possession of the museum until recently. Dr. Friedrich Wimmer, struck by their similarity in shape and by their lack of resemblance to other pottery from the same locality, conjectured that they might be measures, and made an accurate examination of them.

They are both cylindrical in general outline, and each has a small handle near the top, very much like the handles of measuring cups in modern kitchens. The smaller of the two contains a trifle less than a sixth of a pint, and its larger companion almost exactly twice that quantity.

When these cups were in use in the prehistoric neighborhood of Vienna, the high civilizations of Egypt and Babylonia had elaborate systems of measurement; but so far Dr. Wimmer's investigations have not shown any definite relations between these two cups and their contemporaries to the southeast.

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to furnish the West with a supply of Yogi for the sole purpose of fleecing succulent ladies for silly lecture courses in unworkable hokum philosophies. Again, she seems best suited to keep the British lion alive by giving him something to worry about. Then again one wonders if India does not have something to say which is worthy of thought; but when one matches that idea with the squalor and wretchedness of many phases of Hindu life he turns away and faces west again. No, India seems doomed to sterility. The world will not look kindly upon her offerings until she pulls herself out of her (*Turn Page*)