1900, when he was already nearly seventy; he published the concluding volume, on Civilization and History, in 1920. The intervening volumes deal in turn with Art, Myth and Religion, Society and Law. The whole undertaking grew out of Wundt's early conviction that psychological experiment breaks down on the far side of perception and memory, so that the processes of thought and of constructive imagination must be studied by other than experimental means. Hence a "Völkerpsychologie" is, for him, the direct continuation and supplement of experimental psychology. We may dispute his standpoint: we may question whether experiment fails where he makes it fail, and we may question further whether his own social psychology is not rather an application of his individual psychology to the data of social anthropology than the path to a discovery of new psychological principles. We may doubt also whether the time is ripe for generalization, whether there is not more to be gained by intensive labor. But no one who reads the book can fail to pay his tribute of admiration to its unfailing vitality, to its masterful ordering of detail, to its theoretical consistency. The "Kultur und Geschichte" ends on a somewhat forced note of optimism, beneath which there sounds—as how should there not?—a steady undertone of strained perplexity. Yet it is only here and there that the attentive reader discerns a momentary lapse either of style or of logic; the intellectual freshness is maintained to the end.

The significance of Wundt's whole work, if one tries to sum it up in a sentence, lies in the fact that he is the first considerable figure in the history of thought to attack the problems of science and philosophy from the psychological standpoint. Wundt was a born psychologist; and if others before him had a similar temperament, they had not the same opportunity. Wundt himself struggled into psychology, and never shook himself entirely free either of past philosophical systems or of the all-too-logical biology of the first Darwinian time. But he grew with the years: the last edition of the "Physiologische Psychologie" is better psychology than the first. He has often been compared with Herbert Spencer; he himself would prefer to be considered a modern follower of Leibniz. Neither comparison satisfies. Wundt was unique, and we shall not look upon his like again.

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ON THE DETERMINATION OF GEOCHRONOLOGY BY A STUDY OF LAMINATED DEPOSITS

In Science of September 24, 1920, a highly esteemed geologist[1] has honored the Swedish expedition now studying some of the laminated clay deposits of North America with a discussion of its aims and work which seems to call for some reply.

The main purpose of our expedition may be stated as being less the hope of making new discoveries than a first attempt to apply to the late Quaternary deposits in North America the theories that have been developed in Sweden by many years of extensive investigations. There by systematic measurements of certain periodically laminated layers of late Quaternary age we have succeeded in establishing a real, continuous and exact time scale and not merely determinations applicable to isolated localities. Of course many and serious difficulties have been met, and it has taken much time—more than forty years—to overcome them all. The latest and most important progress was my discovery, five years ago, that the variation in thickness of annual layers deposited at different places along the same ice border could be identified, even at the greatest distances from which measurements were obtained, local errors being absent. This indicated a common, general climatic cause. If it can be shown that similar annual variations occur on both sides of the Atlantic, as far as the extension of one and the same climatic zone [can be assumed], it means that the cause must be sought in

[1] Fairchild, H. L., "Pleistocene clays as a chronometer," Science, N. S., Vol. 52, p. 284, 1920.

variation in the amount of heat radiating from the sun.

The premises advanced have not hitherto given rise to any other conclusion as to the cause of the Ice Age than that a solution of the problem, in its general nature, can be reached in this way.

With respect to the method of overcoming the difficulties of the new branch of investigation the brief memorandum which I issued, which was intended mainly for specialists, could only refer to a somewhat more comprehensive statement of mine,[2] which also gave a short historical review from 1878. From this review it may be learned that after publishing in 1884 my first plan of obtaining a geochronology, but before trying earnestly to follow it out, I was so impressed with the supposed difficulties of the task that it was not until 1904, or twenty years later, that I took the matter up seriously. Thus I am indeed well aware that it is not enough to be cautious, one must also be audacious.

Having thus myself delayed for twenty years, it was just with a thought of the daring energy of my esteemed American friends that I gave myself the hope of trying by something like a spurt to regain some portion of the time which had been lost. As may be known by all who have followed this question, the investigations thus begun have been unexpectedly successful in results.

On the present occasion I have appealed to the kind collaboration of my American friends for organizing with their aid the application on their continent of a method of investigation which already has been tested in a region, the nature of which from several points of view has a striking similarity with that of the formerly glaciated regions of North America. Yet, the glaciation of this latter continent was much more extended than that of northern Europe. Certain parts of its highly interesting glacial geology, according to the admirable investigations of the American geologists, showing a very complicated late glacial evolution, it seems highly probable that the introduction and use of a real time scale here will be of special interest and that comparisons with the conditions in Sweden and other parts of northern Europe will doubtless be very instructive in many respects.

In the hope of a continued, fruitful collaboration I use this occasion to express my hearty thanks for the great hospitality and all the kind interest, which from so many sides, in the United States as well as in Canada, have been shown to the expedition, and especially so from the American Scandinavian Foundation, which never fails to support every initiative aiming at the evolution of our mutual relationships.

DE GEER

[2] Gerard de Geer, "A geochronology of the last 12,000 years." Presidential address, Eleventh International Geological Congress, Stockholm, 1910—Map and diagrams. Comptes Rendus, 1912.

SCIENTIFIC EVENTS

DEDICATION OF THE NEW LABORATORY BUILDING OF THE BUREAU OF FISHERIES AT FAIRPORT, IOWA

AT the United States Fisheries Biological Station at Fairport, Iowa, the new laboratory building has been publicly dedicated in the presence of a large assemblage composed of representatives of various state universities, the pearl-button industry and the Bureau of Fisheries, together with the Assistant Secretary of Commerce and the member of congress from the Fairport district.

The new laboratory, which is constructed of concrete, stone and brick, replaces a frame building destroyed by fire in 1917. The building is about 100 by 50 feet, with three stories and half basement; and is superior to the old structure in respect of serviceability, convenience and capacity. The laboratory accommodations for 16 investigators may be increased as circumstances require. A well-lighted library, a chemical laboratory, a photographic room, a museum, a mess hall and kitchen, and tank and aquarium rooms in addition to offices are among the useful features of the building.

The dedication exercises were as follows: