new and interesting facts concerning the weight of the human brain. His material and data were gathered in the Bohemian Institute of Pathological Anatomy and in the Institute of Forensic Medicine, and were subjected to a careful analysis with reference to age, sex, stature, race, muscular and skeletal development, state of nutrition, mental state, occupation, cranial capacity and form, and the mode of death. The work is exhaustive, and hardly permits of suitable abstraction in a limited space. Only a few of the most interesting results may be quoted here.

The heaviest male brain (1,820 gms.) was that of a young man, age 22, of large stature (180 cm.) and powerful build, well-nourished; suicide by drowning. The heaviest female brains, three in number, weighed 1,500 gms. The lightest female brain, from an individual of middle age (25 years), weighed 1,020 gms., with a stature of 150 cm.; cause of death, hemorrhage from a stab-wound of the lung. The brain of a senile female (age, 89) weighed 1,000 gms. The average weight (or as Matiegka specifies, '*der Kulminationspunkt*') of males aged 20 to 59 is 1,400 gms.; of females, 1,200 gms.

Among recent brain-weights of notable persons, Matiegka mentions that of Konstantinoff, a Bulgarian novelist, 1,595 gms.; F. Smetana, the insane composer, 1,250 gms. (atrophy of paralytic dementia); J. G. Kolár, a Bohemian dramatic writer, 1,300 gms. (age, 84 years; senile atrophy), and Marie Bittner, a talented actress, age 44, 1,250 gms. (about 45 gms. above the average). The skull of P. J. Šavařík, the noted Slavist, had a capacity of 1,738 c.c., which, with Manouvrier's coefficient 0.87, gives an estimated brain-weight of 1,512 gms.

One of the most interesting chapters in Matiegka's monograph concerns the relations of brain-weight and occupation. For this analysis he had 235 brain-weights at his disposal, which he arranged in six groups, ascending from the ordinary day-laborers, who never could learn a trade or remain steadily employed, to those of considerable mental ability. The table is here reproduced in condensed form:

		No. of Cases.	Average Brain-weight.
Group	I. Day-laborers	14	1,410.0
"	II. Laborers	34	1,433.5
"	III. Porters, watchmen, etc.	14	1,435.7
"	IV. Mechanics, trades-workers, etc.	123	1,449.6
"	V. Business-men, teachers, clerks, professional musicians, photographers, etc..	28	1,468.5
"	VI. Men of higher mental abilities, presupposing a collegiate education, such as scholars, physicians, etc.	22	1,500.0

Persons employed in clothing industries, who are apt to be poorly nourished and not very muscular, show a lower brain-weight, 1,433.6 gms. Carpenters (11 cases) have 1,441.8 gms.; coachmen and truck-drivers (14 cases), 1,445.7 gms. Blacksmiths, locksmiths and metal-workers in general, who are as a rule muscular and well-nourished, have a higher brain-weight (21 cases) 1,476.7 gms. Persons occupied in the manufacture and sale of alcoholic beverages (brewers, tavern-keepers, waiters, etc.) have a low brain-weight (16 cases), 1,416.9 gms., doubtlessly due to the large proportion of drinkers among them.

These results are indeed striking and significant, and while they may be challenged as being based upon an insufficient number of cases, the method of the analysis employed by Matiegka is worthy of wide-spread adoption in anatomical institutes everywhere.

E. A. SPITZKA.

THE ST. LOUIS CONGRESS OF ARTS AND SCIENCES.

WE begin on Monday, the 19th of September, 1904, late enough to avoid the tropical summer heat of St. Louis, and early enough still to make use of the university vacations. On Monday morning the subject for the whole congress is knowledge as a whole, and its marking off into theoretical and practical knowledge. Monday afternoon the seven divisions meet in seven different halls; Tuesday the seven divisional groups divide them-

selves into the twenty-five departments, of which the sixteen theoretical ones meet in sixteen different halls on Tuesday morning, and the nine practical, on Tuesday afternoon. In the following four days the departments are split up into the sections; the seventy-one theoretical sections meeting on Wednesday, Thursday, Friday, Saturday, about eighteen each morning in eighteen halls, and the fifty-nine practical sections on the same days in the afternoons, the arrangement being so made that sections of the same department meet as far as possible on different days, every one thus being able to attend in the last four days of the first week the meetings of eight different sections, four theoretical and four practical ones, in the narrower circle of his interests. In the second week a free sub-division of the sections is expected, and, moreover, a number of important independent congresses, as, for instance, an international medical congress, an international legal congress, and others, are foreseen for the following days. These independent congresses will highly profit from the presence of all the leading American and foreign scholars, whose coming to St. Louis will be secured by the liberal arrangements of the official congress in the first week; on the other hand, these free congresses represent indeed the logical continuation of the set work of the first seven days, as they most clearly indicate the further branching out of our official sections, leading over to the specialized work of the individual scholars. And yet this second week's work must be, as viewed from the standpoint of our official congress, an external addition, inasmuch as its papers and discussions will be free independent contributions not included in the one complete plan of the first week, in which every paper will correspond to a definite request. The official congress will thus come to an end with the first week, and we shall indicate it by putting the last section of the last department, a section on religious influence in civilization, on Sunday morning, when it will not be, like all the others on the foregoing days, in competition with fifteen other sections, and may thus again combine the widest interests. In this section there will be room also for the closing exercises of the official occasion.

The arrangement of the sciences in days and halls is however merely an external aspect. We must finally ask for the definite content. Our purpose was to bring out the unity of all this scattered scientific work of our time, to make living in the world the consciousness of inner unity in the specialized work of the millions spread over the globe. The purpose was not to do over again what is daily done in the regular work at home. We desired an hour of repose, an introspective thought, a holiday sentiment, to give new strength and courage, and, above all, new dignity to the plodding toil of the scientist. Superficial repetitions for popular information in the Chautauqua style and specialistic contributions like the papers in the issues of the latest scientific magazines would be thus alike unfit for our task. The topics which we need must be those which bring out the interrelation of the sciences as parts of the whole; the organic development out of the past; the necessary tendencies of to-day; the different aspects of the common conceptions; and the result is the following plan:

We start with the three introductory addresses on 'Scientific Work,' on the 'Unity of Theoretical Knowledge,' and on the 'Unity of Practical Knowledge,' delivered by the president and the two vice-presidents. After that the real work of the congress begins with a branching out of the seven divisions. In each one of them the topic is fundamental conceptions. Then we resolve ourselves into the twenty-five departments, and in each one the same two leading addresses will be delivered; one on the development of the department during the last hundred years, and one on its methods. From here the twenty-five departments pass to their sectional work, and in each of the one hundred and thirty sections again two set addresses will be provided; one on the relations of the section to the other sciences, one on the problems of to-day; and only from here does the work move during the second week into the usual channels of special discussions. We have thus during the

first week a system of two hundred and sixty sectional, fifty departmental, seven divisional, three congressional addresses which belong internally together, and are merely parts of the one great thought which the world needs, the unity of knowledge.—Professor Hugo Münsterburg in the *Atlantic Monthly.*

SCIENTIFIC NOTES AND NEWS.

During the week beginning June first, Professor J. J. Thomson, F.R.S., Cavendish professor of experimental physics in the University of Cambridge, will give a course of lectures in the Physical Laboratory of the Johns Hopkins University on 'A Theory of the Arc and Spark Discharges.'

Professor Klement Arkadijevic Timirjazev, professor of botany at Moscow, gave the Croonian lecture before the Royal Society on April 30, his subject being 'The Cosmical Function of the Green Plant.'

The University of Glasgow has conferred the degree of Doctor of Laws on Sir Norman Lockyer, director of the Solar Physics Observatory, South Kensington, and editor of *Nature;* Dr. Thomas Oliver, professor of physiology in the University of Durham, and Mr. Philip Watts, director of naval construction at the Admiralty.

The University of Dublin has conferred the degree of Doctor of Science on Sir William Abney, F.R.S., assistant secretary of the British Board of Education, known for his work on photography and color vision.

We learn from *Nature* that M. Lippmann is to succeed M. Poincaré as president of the French Astronomical Society this month. M. Janssen has been elected *president d'honneur.* The society's prize has been awarded to M. Charlois for the discovery of a large number of minor planets, and the Janssen prize to M. Giacobini for the discovery of seven comets.

Professor Ralph W. Tower, of Brown University, associate professor of chemical physiology, has been elected head of the department of physiology and curator of the books and publications in the American Museum of Natural History in New York City.

Mr. Sidney D. Townley has been placed in charge of the International Latitude Observatory at Ukiah, Cal.

Mr. Hugh H. Bennett, assistant in the Chemical Laboratory, University of North Carolina, has accepted the position of assistant in the Chemical Laboratory, Division of Soils, U. S. Department of Agriculture.

Dr. Capitan has been made a member of the committee on historic and scientific works of the French ministry of public instruction, in room of the late M. Bertrand.

Mr. F. A. Delano, general manager of the C. B. and Q. R. R., gave an address before the engineering students of Purdue University upon 'The Comparative Development of American and European Railways,' on April 13.

Drs. William H. Welch and William Osler gave a dinner at the Maryland Club, April 18, to Dr. Robert Fletcher, of Washington, editor of the 'Index Medicus,' to celebrate the revival of its publication.

Mr. H. F. Perkins, of the University of Vermont, has been given a research assistantship by the Carnegie Institution for study of special organs and structure of jelly-fish which affect their distribution.

Professor Charles S. Sargent, director of the Arnold Aboretum, Harvard University, will spend next year abroad, devoting a part of the time to studying the trees of Siberia.

Dr. W. A. Setchell, professor of botany in the University of California, has been given a year's leave of absence which he will spend in Europe.

M. E. Jaffa, assistant professor of agriculture in the University of California, who has for the present year been carrying on studies in nutrition in conjunction with Professor W. O. Atwater, has gone to Europe to visit the centers where similar work is in progress.

The National Geographic Society has appointed Mr. William J. Peters, of the U. S. Geological Survey, as its representative on the Arctic expedition to be sent by Mr. William Ziegler. Mr. Peters will be second in com-