

CONCLUSION

Java was hot and there were other discomforts, but all who were present at the congress returned to their homes appreciative of the charms and manifold subjects of scientific and other kinds of interest of what is perhaps the most fascinating of tropical islands, deeply grateful for the courtesies and hospitality extended to them and convinced that the Fourth Pacific Science Congress was the most successful of that series of congresses. Thanks are due all of those who contributed to the social enjoyment and the scientific accomplishments of the congress, but it may be permissible to emphasize the part played by the general president, Dr. Otto de Vries. He showed capacity in the organization of the congress, his handling of all matters connected with it was tactful and his genial personality endeared him to every one. We congratulated him on his success and told him that we were proud of him.

REPRESENTATIVES OF INSTITUTIONS AND ORGANIZATIONS
OF THE UNITED STATES AT THE FOURTH PACIFIC
SCIENCE CONGRESS, BATAVIA AND BANDOENG,
JAVA, MAY 16 TO 24, 1929

Mr. George Arceneaux, Office of Sugar Plant Investigations, Bureau of Plant Industry, U. S. Department of Agriculture, Homer, Louisiana.

Dr. William H. Brown, director, Philippine Bureau of Science, Manila, Philippine Islands.

Professor Hubert Lyman Clark (and Mrs. Clark), curator of marine invertebrates, Museum of Comparative Zoology, Harvard University.

Lieutenant-Commander Leo O. Colbert, director, Coast and Geodetic Survey for the Philippine Islands, Manila, Philippine Islands.

Dr. Frederick V. Coville (and Mrs. Coville), principal botanist, Bureau of Plant Industry, U. S. Department of Agriculture.

Professor George B. Cressey, Department of Geology, Shanghai College, China.

Dr. Heber D. Curtis, director, Allegheny Observatory, University of Pittsburgh.

Dr. George A. Dorsey (and Mrs. Dorsey), lecturer, New School for Social Research, 465 West 23rd Street, New York City.

Mr. Harry T. Edwards, senior technologist, Office of Fiber Plants, Bureau of Plant Industry, U. S. Department of Agriculture.

Mr. Roy H. Finch, associate volcanologist, Lassen Volcano Observatory, Geological Survey, U. S. Department of the Interior, Mineral, California.

Mr. Henry W. Fowler, associate curator of vertebrate zoology, Academy of Natural Sciences, Philadelphia, Pennsylvania.

Dr. Fred W. Foxworthy, forestry research officer, Kuala Lumpur, Federated Malay States.

Professor E. M. Harvey, Department of Horticulture, Oregon State Agricultural College, Corvallis.

Professor Wm. E. Hoffmann, professor and head of the department of biology, Lingnan University, Canton, China.

Dr. Carl L. Hubbs, curator of fishes, Museum of Zoology, University of Michigan.

Professor Emeritus A. C. Lawson, Department of the Geological Sciences, University of California.

Professor George D. Louderback (and Mrs. Louderback), Department of the Geological Sciences, University of California.

Mr. Augustine B. McManus (and Mrs. McManus), senior scientist, Hydrographic Office, U. S. Navy Department.

Mr. Paul Banwell Means, 296 Oranje Nassaustraat, Medan, Sumatra.

Professor John A. Miller (and Mrs. Miller), director, Sproul Observatory, Swarthmore College.

Professor Robert E. Park (and Mrs. Park), Department of Sociology and Anthropology, University of Chicago.

Dr. Robert D. Rands, senior pathologist, Office of Sugar Plant Investigations, Bureau of Plant Industry, U. S. Department of Agriculture.

Dr. Oswald Schreiner, principal biochemist in charge, Soil Fertility Division, Bureau of Chemistry and Soils, U. S. Department of Agriculture.

Professor W. A. Setchell (and Mrs. Setchell), Department of Botany, University of California.

Dr. Philip S. Smith (and Mr. Sidney B. Smith, Miss Katherine Smith, son and daughter), chief Alaskan geologist, Geological Survey, U. S. Department of the Interior.

Dr. T. Wayland Vaughan, director, Scripps Institution of Oceanography, University of California, La Jolla, California.

Participants (not members) of the congress: Mr. J. Gordon Carlson, assistant to Dr. Fowler, zoology; Mr. J. Rupert Mason, irrigation expert, San Francisco (and Mrs. Mason), agriculture; Mr. Larry B. Miller, Swarthmore College, astronomy; Mr. Walter H. Robinson, Swarthmore College, astronomy.

THE NINTH INTERNATIONAL CONGRESS OF PSYCHOLOGY

By Professor HERBERT S. LANGFELD

PRINCETON UNIVERSITY, FOREIGN SECRETARY OF THE CONGRESS

THE Ninth International Congress of Psychology was held at Yale University from September 1 to 7, 1929. "Enfin, enfin en Amerique!" exclaimed Pro-

fessor Claparède, in his address on the opening day. For although this meeting took place on the fortieth anniversary of the First International Congress, it is

the first time the congress has convened on American soil. As far back as the Congress of London in 1892, it was proposed to hold a meeting in America, and several times since then plans for an American Congress were started, but in every case some obstacle, either personal, political or economic, intervened to several times since then plans for an American Committee, consisting of Baldwin, James, Hall, Fullerton, Donaldson and Witmer, decided it was impracticable. In 1905 in Rome, James invited the congress to meet in the United States, but when he found that his friend, Flournoy, had invited the congress to meet in Geneva, he withdrew his proposition. In 1909 at Geneva, the American invitation was accepted for a meeting in 1913, but the death of James caused a postponement. Then came the war. At the Congress of Oxford in 1923 it was again proposed to meet in the United States, but as it was evident that the economic conditions of Europe would prevent most of the foreigners from attending, the idea was again abandoned. And so it was not until 1929 that plans initiated at the Congress of Groningen could be brought to a successful conclusion.

The congress was held under the auspices of the American Psychological Association, and the latter's annual meeting, which usually takes place in December, was merged with that of the International Congress. The American Psychological Association elected James McKeen Cattell president of the congress, J. R. Angell vice-president and E. G. Boring secretary. The association also elected a national committee, consisting of J. E. Anderson, Minnesota; J. R. Angell, Yale; Madison Bentley, Cornell; E. G. Boring, Harvard; E. A. Bott, Toronto; H. A. Carr, Chicago; J. McK. Cattell, New York; Raymond Dodge, Yale; Knight Dunlap, the Johns Hopkins; S. W. Fernberger, Pennsylvania; W. S. Hunter, Clark; H. S. Langfeld, Princeton; William McDougall, Duke; W. B. Pillsbury, Michigan; C. E. Seashore, Iowa; L. M. Terman, Stanford; E. L. Thorndike, Columbia; H. C. Warren, Princeton; M. F. Washburn, Vassar; R. S. Woodworth, Columbia, and R. M. Yerkes, Yale. R. S. Woodworth was appointed treasurer, W. S. Hunter executive secretary, H. S. Langfeld foreign secretary, Raymond Dodge chairman of the program committee and R. P. Angier chairman of the local committee.

The First International Congress, which was held in Paris in 1889, had two hundred members. The total registration of the Ninth International Congress was 1,051 persons, and there were also 394 absentee members, of whom 271 were Americans and 123 foreigners. This enrolment was very much larger than at any previous international congress. An analysis of the enrolment revealed the following facts: American members, 722 (men 471, women 251); wives of

American members, 82; American guests, 124 (men 71, women 53); foreign members, 104 (men 90, women 14); wives of foreign members, 14; foreign guests, 5.

The American members came from forty-two states, Canada, Mexico and Porto Rico. The largest delegation was from New York (196). Next in order came Massachusetts 80, Ohio 47, Illinois 42, Pennsylvania 40, Connecticut 39, Minnesota 29, Michigan 24, New Jersey 24, California 20. The foreign members were from twenty-one countries. England led with 22, then came Germany 17, Russia 10, Netherlands 8, India 6, and Austria, France, Japan and Switzerland, 5 each. The governments of China, Belgium, Denmark, Netherlands, India and Greece appointed official representatives.

Prominent among the foreigners were I. Pavlov, the famous leader of the Russian reflex school; Ed. Claparède, of Geneva, who for many years has been productive in both the theoretical and the experimental field and who has shown broad interests in animal behavior; C. Spearman, of the University of London, who has been the champion for many years of the general factor of intelligence; Beatrice Edgell, of the faculty of the same university; F. C. S. Schiller, a staunch supporter of the philosophy of William James and chief exponent of Pragmatism; James Drever, of Edinburgh, who has one of the best laboratories in the United Kingdom; R. H. Thouless, of Glasgow, who has specialized in the psychology of religion; L. Wynn-Jones, of Leeds, and F. Aveling, of London, both of whose names appear frequently in the *British Journal of Psychology* and other scientific journals; Wolfgang Köhler, of Berlin, leader of the *Gestalt* movement, and Kurt Lewin, who conducts many important experiments in Köhler's laboratory; William Stern, of Hamburg, who together with his wife wrote one of the first studies of early childhood and has ever since been a leader in child psychology; W. Wirth and Otto Klemm, of Leipzig, the former an authority on psychophysics, the latter author of a popular history of psychology; Gustav Kafka, of Dresden, author of a well-known comparative psychology (Kafka has remained in America to lecture for a half-year at the Johns Hopkins); Otto Lipmann and Hans Rupp, of Berlin, both exceedingly productive applied psychologists; D. Katz, of Rostock, who has produced numerous important experimental studies; H. Piéron, the brilliant experimentalist of the Sorbonne; Karl Bühler, of Vienna, the well-known experimental and educational psychologist, and his wife, Charlotte Bühler, who has recently published a book on childhood and is lecturing at Barnard during the winter semester; A. Michotte, of Louvain, who produces numerous laboratory studies and plans val-

uable apparatus; A. Decroly, of Brussels, who is a leader in educational psychology; E. Rubin, of Copenhagen, who has made memorable contributions to the *Gestalt* movement; F. Roels, of Utrecht, a pupil of Michotte and secretary of the last international congress; A. Grünbaum, of Amsterdam, who has had a broad training in psychology and is at present specializing in abnormal psychology; M. Ponzio, of Turin, who together with his colleague Kiesow is very productive in experimental laboratory work; I. Spielrein, of Moscow, who is active in industrial psychology; P. S. Kupalov, of Moscow, one of the best of the reflex men (he has been working recently in Cornell); A. R. Luria, of Moscow, prominent among the younger group of Russia and a specialist in educational psychology; E. Mira, of Barcelona, energetic worker in experimental psychology; G. Jaederholm, of Gothenburg, who is well-known in America through his frequent visits.

All the members of the congress and their wives were housed in the Harkness Memorial Quadrangle and meals were served in the university dining-hall. The foreigners were guests of Yale during the week of the congress, and the generous hospitality of the university was greatly appreciated by them. The fact that all the psychologists lived in the same building helped to preserve the unity of the unusually large group, and the beautiful court of the dormitory offered an inviting place for many impromptu discussions, which frequently lasted into the small hours of the morning.

Arrangements were made for excursions in the afternoon to the various laboratories and other places of interest in New Haven. On Wednesday afternoon, there was a reception by the president of Yale University in the new School of the Fine Arts, at which the members of the staff of the psychology department of Yale assisted. Plans for the comfort and welfare of the members were carried out by the local committee to the smallest detail, so that, in the words of Professor Jastrow, "Yale was, in truth, a New Haven of human relations."

The general scheme of the program committee was to obtain papers from the largest possible number of members, in order that the proceedings should present a true idea of the present status and tendencies of psychology throughout the world. In order to carry out this plan, it was arranged to have twenty-minute papers by invitation in the morning sessions and numerous symposia in the afternoon, with papers of eight minutes in length. The evenings were devoted to lectures by a selected number of distinguished men. There were usually three parallel sessions in the morning, and from five to seven parallel symposia in the afternoon. There were seventy-four papers listed in

the morning sessions, and 350 in the symposia. In addition, there were a few papers read by title only. Thirty-seven of the morning contributions and forty-two of the symposia were by foreigners. It is evident that no one was able to hear more than a very small fraction of the papers, but psychology is fast breaking up into specialized groups, and most persons were able to chart their route through the program without too many cross currents of conflicting interests. After the evening lectures, there was an informal smoker in the dining hall, where there was also an exhibition of instruments and books.

On the morning of September 2, the congress was officially opened with a graceful address of welcome by President J. R. Angell, of Yale, who generously offered to the visitors the hospitality of the university. Dr. J. McKeen Cattell followed with an address as president of the congress. Dr. Cattell described the development of psychology in America and gave a very clear and convincing proof of the great progress which psychology has made in this country in the last few decades. Among other facts, he described the steady growth of the membership of the American Psychological Association from thirty-one regular members in 1892 to 540 in 1929, and presented an analysis of contributions to psychology. Professor Ed. Claparède, as secretary of the international committee, replied to the address of welcome with an account of the history of the international congress. He particularly emphasized the pleasure with which the international committee accepted the invitation to come to America. "For us of the Old World," he said, "America has danced before our eyes for forty years as the promised land." The last of the morning speeches was by Mr. William John Cooper, who came from Alaska to New Haven for the purpose of representing the national government at the congress. He spoke particularly of the great value of psychology to education.

The first of the evening lectures was by Dr. I. Pavlov, of Leningrad. Although the famous eighty-year-old scientist delivered his address in Russian, he spoke with such enthusiasm and dramatic fervor that even if Dr. Anrep had not acted as interpreter, his gestures and voice alone would have held the interest of the audience. Dr. Pavlov described the most important results and theoretical implications of his many years of work on the conditioned reflex. The second address was by Professor Wolfgang Köhler, of Berlin, who explained the main concepts of the *Gestalt* psychology, and described some of the more important problems which he and his school have attempted to solve. His clear exposition of this latest tendency in psychology will undoubtedly be of considerable assistance to the members in understanding Dr. Köhler's recent book on the subject.

Tuesday evening the first lecture was by Professor A. Michotte, of Louvain, who described some of the experiments on perception which he and some of his collaborators are performing in his well-organized laboratory. One of his most interesting problems is that of the illusion of movement of one's body which occurs when one's hands are moved involuntarily by a specially designed instrument, while one's eyes are shut and one's body is held stationary. Professor Piéron, of Paris, spoke upon the nature of pain, a subject that has interested him for some time. He is of the opinion that pain has a quality distinctly different from the sensations and he developed his thesis with his customary charm of exposition.

The banquet was held on Wednesday night, and was attended by 554 members and guests. After the dinner, Professor K. S. Lashley delivered the presidential address of the American Psychological Association, which is generally given at the annual meeting of the association. Professor Lashley spoke upon the basic neural mechanism in behavior, and it was the general opinion that his address was the outstanding feature of the congress. He gave an inspiring exposition of his latest views concerning the vicarious functioning of the central nervous system, views which are based upon his numerous experiments upon animals. His ideas gave evidence of keen insight and imagination and will undoubtedly have an important place in the history of physiology.¹

The following evening, Professor William Stern, of Hamburg, spoke upon the science of human beings. He dwelt particularly upon the problem of personality and stressed the necessity of studying personality as a unit and not as a group of detached functions, a view which is in accord with *Gestalt* psychology. Professor M. Ponzio lectured upon psychic dynamism and the researches of the school of psychology of Turin.

The final lectures, on Friday, were by Professor Carl Spearman, of the University College of London, and Professor E. L. Thorndike, of Teachers College, Columbia. Professor Spearman offered a theory of the creative mind in terms of the completion of analogies. To illustrate his thesis, he showed the manner in which the mind completes a melodic sequence in music or a sequence of lines or figures in the visual arts. Professor Thorndike described some experiments which seemed to refute the old idea of the potency of primacy and recency in learning. He also quoted results to prove that repetition seems to be more important in learning than the *Gestalt* psychologists would lead one to suppose.

It is obviously impossible in a report such as the present one to give descriptions of the papers pre-

¹ The address will be published in the January number of the *Psychological Review*.

sented.² An enumeration of the various divisions of the morning sessions and the topics discussed in the symposia may, however, be of value as showing the range of interests of the psychologists of 1929.

In the morning sessions, there were usually six papers in each division. The grouping was as follows:

Theory and History of Psychology: H. C. WARREN, Princeton, chairman.

Comparative Psychology: J. R. ANGELL, Yale, chairman.

Educational Psychology: E. L. THORNDIKE, Teachers College, Columbia, chairman.

Methodology and Technique: CARL SPEARMAN, University College, London, chairman.

Social Psychology: JAMES DREVER, Edinburgh, chairman.

Child Development: KARL BÜHLER, Vienna, chairman.

Physiological Psychology: HENRI PIÉRON, Paris, chairman.

Psychology of Personality: WILLIAM STERN, Hamburg, chairman.

Abnormal and Clinical Psychology: JOSEPH JASTROW, New York, N. Y., chairman.

Experimental Psychology: A. MICHOTTE, Louvain, chairman.

Psychology of Industry and Personnel: F. ROELS, Utrecht, chairman.

Theory and History of Psychology: EDUARD CLAPARÈDE, Geneva, chairman.

Experimental Psychology: WOLFGANG KÖHLER, Berlin, chairman.

The number of papers in the symposia varied considerably. Under certain circumstances, the number of papers offered might be taken as an indication of the interest in that particular subject. But in this instance it may be suspected that the size of the symposium depended in great measure on the enthusiasm and energy which the chairman showed in his preliminary arrangements. The list of symposia follows:

Animal Behavior: C. P. STONE, Stanford, chairman.

First Session: *Communications on Experimental Studies of Native or Congenital Behavior*. (11 papers.)

Second Session: *Communications on Learning and the Higher Thought Processes*. (9 papers.)

Applications of Psychology to Methods of Teaching: C. H. JUDD, Chicago, chairman. (9 papers.)

Effects of Drugs: R. H. PAYNTER, Long Island University, chairman. (9 papers.)

Industrial Psychology: A. T. POFFENBERGER, Columbia, chairman. (8 papers.)

Maladjustments: F. L. WELLS, Boston Psychopathic Hospital, chairman. (13 papers.)

Psychogalvanic Reflex: CARNEY LANDIS, Wesleyan University and Behavior Research Fund, chairman. (15 papers.)

² Abstracts of all papers will be printed in the *Proceedings*, which will appear about January and which may be obtained from the Psychological Review Company, Princeton, New Jersey.

Theoretical Psychology: MADISON BENTLEY, Cornell, chairman. (6 papers.)

Character and Personality: F. H. ALLPORT, Syracuse, chairman. (18 papers.)

General Intelligence: E. A. CULLER, Illinois, chairman. (6 papers.)

Legal Psychology: CARL MURCHISON, Clark, chairman. (24 papers.)

Subdivisions:

I. *Approaches to the Field of Legal Psychology.*

II. *Juvenile Delinquency.*

III. *General Delinquency.*

IV. *Detection.*

V. *Punishment.*

VI. *Social Implications.*

Meaning and Symbolism: C. A. RUCKMICK, Iowa, chairman. (11 papers.)

Psychophysics: S. W. FERNBERGER, Pennsylvania, chairman. (No formal papers.)

Abnormal Psychology: J. W. BRIDGES, McGill, chairman. (13 papers.)

Child Development: J. E. ANDERSON, Minnesota, chairman. (20 papers.)

Eye-Movements: W. R. MILES, Stanford, chairman. (4 papers.)

Laboratory and Teaching Devices: K. M. DALLENBACH, Cornell, chairman. (16 papers.)

Memory and Learning: E. S. ROBINSON, Yale, chairman. (17 papers.)

Psychology of Music: C. E. SEASHORE, Iowa, chairman. (11 papers.)

Race Differences: JOSEPH PETERSON, George Peabody College for Teachers, chairman. (5 papers.)

The Nature of G: CARL SPEARMAN, University College, London, chairman. (4 papers.)

Personnel Psychology: W. V. BINGHAM, Personnel Research Federation, chairman. (7 papers.)

Physiological Psychology: R. S. WOODWORTH, Columbia, chairman. (15 papers.)

Social Psychology: WILLIAM McDUGALL, Duke, chairman. (4 papers.)

Statistical Method: C. L. HULL, Yale, chairman. (8 papers.)

Sleep: H. M. JOHNSON, Simmons Investigation of Sleep, chairman. (9 papers.)

Esthetics: H. S. LANGFELD, Princeton, chairman. (15 papers.)

Mental Tests: M. L. REYMERT, Wittenberg, chairman. (28 papers.)

Motivation: H. A. CARR, Chicago, chairman. (5 papers.)

Reflexes: HULSEY CASON, Rochester, chairman. (13 papers.)

Religious Psychology: E. D. STARBUCK, Institute of Character Research, chairman. (11 papers.)

Sensation and Perception: H. P. WELD, Cornell, chairman. (6 papers.)

The morning sessions and symposia were all well attended, and there was considerable discussion, especially in the symposia, which proved to be an excellent arrangement for meeting the diversified interests of so large a group of scientists.

At the business meeting of the congress, it was voted to hold the Tenth International Congress in Copenhagen in 1932. The following members were added to the standing International Committee: *Brazil*, H. deB. B. Roxo; *Canada*, E. A. Bott; *Germany*, G. Kafka, D. Katz, O. Klemm, K. Lewin, W. Wirth; *Great Britain*, F. Aveling, Beatrice Edgell, L. Wynn-Jones; *Holland*, L. Bouman, A. A. Grünbaum; *Hungary*, P. Ranschburg; *India*, M. V. Gopalaswami; *New Zealand*, T. A. Hunter; *Poland*, S. Blachowski; *Russia*, I. P. Pavlov, A. B. Salkind, I. Spielrein, V. M. Borovski; *Switzerland*, J. Piaget; *United States*, J. R. Angell, W. S. Hunter, J. Jastrow, K. S. Lashley, E. L. Thorndike, Margaret F. Washburn, R. S. Woodworth. A telegram of condolence was sent to the widow of Morton Prince, who died a few days before the opening of the congress, and greetings to Professor Carl Stumpf and Professor G. Heymans, both of them former presidents of the congress.

Before the meeting, the foreign members visited Princeton and Columbia Universities, and at the close of the session they were given the opportunity of seeing Harvard, Clark, Smith, Wellesley and the biological station at Woods Hole. While at Harvard, they were shown the Psychological Laboratory, the Psycho-Educational Clinic, the Psychological Clinic and Fatigue Laboratory, the Medical School, the Psychopathic Hospital and the Judge Baker Foundation.

At the close of the congress, there was a general impression that never before had there been such a profitable exchange of views among psychologists from almost every country of the world, and the optimistic opinion was expressed that a real advance had been made in an international cooperation for the study of behavior.

PREACHING THE GOSPEL OF SCIENCE

By Dr. RALPH C. BENEDICT

BROOKLYN BOTANIC GARDEN AND HAAREN HIGH SCHOOL

READERS of SCIENCE are accustomed to have their attention focused mainly on exploratory work, investigation, as the most important means by which

the advancement of science may be furthered. The pages of this journal are chiefly occupied with news relating to the scientists of the colleges and those of