hangs on it; thus there emerges a groping sense of rule in good and evil; as in survival superstition divides them into horseshoes and four-leaf clovers and picking up pins and black cats, peacock feathers and breaking mirrors. Just carry that attitude into the thousand-and-one details of your eight-hour-a-day occupation, and imagine what life would be, until you were adjudged *non compos mentis* by your employer and the authorities. If they were similarly affected, the forces of law and order which they represent would not exist.

There is a further clue to primitive mentality which Levy-Brühl calls *dispositions*. How are things, times, localities, operations, events disposed toward you? For everything is disposed to make or mar. Primitive psychology is disposology-reading intentions; and applied psychology is the wisdom of attracting favorable dispositions and avoiding, sidetracking, scapegoating unfavorable ones. The two chapters on dispositions are the richest in the book. Examples are innumerable and striking. A striking one from Tahiti is the tale of a white man spending a night in the cave of a hermit, Afaiau. His host covers him with a coat, as the night is cold, later mentions that the garment belongs to a leper. "I jumped to my feet—reached for the rum bottle—to pour it over my hands and feet for disinfection."

"Why are you so excited and worried? My only intention was to convey comfort to you when I gave you that tunic, and not to convey the disease of its former owner." Disposition determines effects.

Disposition sets the plot of a hundred dramas of the constantly dramatic primitive life. Ceremonials and dances are elaborate rituals for creating dispositions; ancestor worship is based on the same principles, making the dispositions of the dead vital for the living —lest their ghosts haunt.

But be careful as you will, disaster stalks night and day; the fear world casts spells. The cause of causes is bewitchment. Sorcerers abound; unsuspected, another or you yourself carry the Evil Eye. Punishing witches, devising counter-witchcraft becomes the great primitive practice. Moreover, try as you will not to, you will transgress, violate a taboo, and then must be applied the purification ceremonies—a Bible in their wealth of prescriptions. Between fearing, avoiding and purifying, the primitive man spent his days, entangled in the web of his own psychology. Much of this ceremonial is entirely out of the horizons of our understanding. Purification by blood produces a rich, weird and mystic magic. And so the tale goes on and on and never ends.

It is a wholesome discipline for neo-modern sophisticated, privileged, informed and clarified minds to contemplate the crude and cruel practices, the weird and bizarre products of belief, groping in bewilderment for some shelter of sanctuary in a troubled and hostile world. Such are the beginnings of our intellectual heritage. From this somehow, as mind was in the making, evolved the orderly world of orderly understanding and reasonable security. Wonderfully and fearfully made indeed is the mind of man and its employments, and equally so the story of how the rough road became a safe and speedy highway of thought.

JOSEPH JASTROW

SOCIETIES AND MEETINGS

THE SEVENTH AMERICAN SCIENTIFIC CONGRESS

UPON invitation of the organizing committee appointed by the Department of Public Education of the Republic of Mexico, the United States and its various scientific societies were invited to meet in Mexico City from September 8 to 17 to participate in the seventh American Scientific Congress. The United States Government designated the following delegates: Dr. Wallace W. Atwood; Dr. J. McKeen Cattell; Dr. Franklin S. Harris; Professor Edward V. Huntington; Neil M. Judd; France V. Scholes; Dr. Cloyd H. Marvin, *Chairman;* William W. Schott, *Secretary.*

In addition there were delegates from forty-five universities and scientific societies of the United States. Most of the delegates were appointed in response to an invitation from the Department of State extended through the American Association for the Advancement of Science.

The congress was opened at the Palace of Fine Arts, and at the first plenary session the eminent geologist, Dr. Pedro C. Sánchez, president of the organizing committee of the congress, outlined the history of past scientific congresses. His address, like those of President Cardenas and Secretary Ponton, was given in Spanish and subsequently translated into English. The following is an extract from Dr. Sánchez's address:

> The first scientific congress took place at Buenos Aires in 1898, convoked by the Hispanic-American countries, at the time of the silver jubilee of the Argentinian Scientific Society. It was said then that the isolation of Spanish America must cease, an isolation which was, in practice, worse than barbarousness: for nobody was interested in the intellectual life of the Hispanic-American

people, least of all they themselves. It was necessary, so said the Argentinians at the end of last century, to multiply the libraries and supply them properly with books, to support the universities, which are the home of research and the seed-beds of knowledge, and then, to come into contact and touch with intellectuals of other countries, in order jointly to erect the house of science and mutual understanding. After the Buenos Aires Congress of 1898, one was held in Montevideo in 1901, in Rio de Janeiro in 1905, and in Santiago de Chile in 1908, at which more than 2,000 intellectuals from the whole Continent were present. This Congress in Santiago de Chile was the first one which could really be termed a Pan-American one. After this followed the one held at Washington, D. C., in 1915, then one at Lima, Peru, in 1924, and this one, the seventh, being inaugurated to-day in this year of 1935 in Mexico City. These congresses have extended the frontiers of science and laid the foundations for permanent friendships between intellectuals of the whole continent.

Following the plenary session, General Lázaro Cárdenas, President of the Republic of Mexico, formally opened the congress with the following address:

Upon initiating your important work in the seventh American Scientific Congress, I have the honor to appear before the delegates to welcome you most cordially, and to manifest to you that the Government over which I preside is deeply interested in the movement which to-day brings together the most distinguished men of science of the continent.

Confirming these sentiments of cordial and sincere hospitality, I feel called upon to state my firm conviction that it is eminently useful to revolutionary Governments such as the one over which I have the honor to preside, to be able to base their actions on an exact, concrete and scientific knowledge of their real environment. Analyzed and studied in such assemblies as this, conclusions are arrived at which will favor the working classes, giving their problems a clear social justification and unifying the different standards of continental government into one mass consciousness, forging thereby a true and lasting link in the anxiously sought-after fusion of the peoples.

This is gathered from the very summons to the Congress, in which all the representatives of human knowledge are called to a contest of intelligence, from which a cultural unity will result; the ideal of scientific American progress will be resolved, and the unknown qualities of our sociology will be defined in order that the leaders of these peoples do not have to continue seeking blindly for the truth and scope of such problems, inasmuch as scientific investigation, carried out by well-prepared persons with all the instruments of technical knowledge at their command, will permit us to arrive at a just valuation of the needs, and an actual and positive opinion of our future.

May my voice carry a cordial greeting to all the sons of this continent, together with the firm conviction of the Mexican nation that this congress will serve to strengthen the bonds of race and of culture until the dispersed peoples will be united in a harmonious whole, one continent with full consciousness of its destiny and a noble desire to fulfil it.

Finally, may this assembly have the success that its high purpose deserves.

President Cárdenas's address was followed by the address of Licenciado Luis Sánchez Ponton, secretary general of the congress; in it he said:

In the name of the organizing committee of the seventh American Scientific Congress that has worked with the most earnest help under the auspices of the Ministries of Foreign Affairs and Public Education, I have the pleasure to extend the most cordial welcome to the distinguished official representatives, delegates from universities and cultural institutions and men of science of this continent, who answered our call, and to offer them the friendly and hospitable hand of the men of learning and of the students of Mexico.

Mexico is again honored by the visit of delegates from sister countries of America, who gather under our sky to meet each other and to discuss within the boundaries of the most noble friendship the problems that preoccupy the people of this hemisphere. Mexico has enjoyed, during the last few months, the privilege of being selected as the meeting place of the most important assemblies of international character, some of world importance and others of local character, and the congresses that meet this year will make of Mexico, at least temporarily, the essential point at which the most distant men and ideas may live for a few moments, if ephemeral in their formal aspect, eternal regarding their final results.

But, at this gathering we are not going to hear the voice of men who are here to tighten the bonds of economic interests or of those sectors devoted to solve the problems of only one branch of science. Men, representatives of all the American nations, eminent workers in all the fields of learning, are the ones who constitute this congress, men of different races, nationalities, trends of thought, etc., but strongly bound by a sole and identical preoccupation, that is, the unselfish search for truth.

Here we are on a new stretch of the road which, almost four decades ago, the intellectuals of the continent first trod when holding the first assembly of this kind at the capital of the sister Republic of La Plata, convened by the "Argentinian Scientific Society."

In response to the welcome given by the President of the Republic and the secretary general of the organizing committee of the congress, the chairman of the delegation from the United States, Dr. Cloyd H. Marvin, spoke as follows:

On behalf of the delegation of the United States of North America to this seventh American Scientific Congress, I express our sincere gratitude for the hearty welcome which has just been extended to us. I take this opportunity to assure our sister republic and our hostess,

as well as those who make up the membership of this splendid gathering of investigators, that those of us who have the honor to represent the United States and its various scientific societies have come to Mexico with the hope that we may return to our homes with the satisfaction of having established more intimate personal ties with the intellectual investigators from the other American states here represented.

We earnestly desire to be colleagues in a very true sense. We look eagerly to this possibility for the interchange of ideas that grow out of the discussions of our respective investigations. We believe that in our strengthened friendships and in our exchange of scientific findings we are certain to build an understanding and a trust that will make for a finer and more effective cooperation between the leaders in learning in the Americas.

We can not overestimate the importance of the place or time of this congress. It is fine that our immediate and good neighbor, Mexico, has extended the invitation to the congress at this time. It seems peculiarly fitting that this country, which now is especially interested in the advance of scientific knowledge, and which has an understanding of both our continents, should be our meeting place. Whatever may be the contributions to knowledge made here, two things, over and above such contributions, will stand out: first, the furthering of understanding and good will among peoples of the western hemisphere; and second, the example in a community leadership for freedom.

This seventh American Scientific Congress meets at a period when the countries of Europe have cut themselves off in a large measure from intellectual intercourse, when, in fact, many of them have stifled thought within their own borders. The American republics must take again a leadership by furnishing an example of the maintenance of freedom of thinking and the free interchange of thought among nations. Just as the Americas in the nineteenth century championed the cause of democratic government, so, to-day, they must carry the torch of the republic of learning which is not a delimited preference having geographic or national boundaries, but rather a World State dedicated to the cause of the progress of mankind.

We are glad to have the privilege of meeting with you.

The congress was organized in fourteen sections, which were as follows: Physics and Mathematic Sciences; Geology; Engineering; Industrial Chemistry; Agricultural Sciences; Biological Sciences; Medical Sciences; Hygienical Sciences; Anthropological and Historical Sciences; Economical and Social Sciences; Educational Sciences; Bibliography; Indianism; Juridical Sciences. In addition to the scientific program the delegates were invited to a reception given by the Minister of Foreign Affairs, a visit to San Juan Teotihuacán, where luncheon was served, with the Minister of Public Education as host, a visit to the Cacahuamilpa Caves and to Cuernavaca, where luncheon was served, with the Minister of National Economy as host. A reception was held at the National Palace on the evening of September 15, to celebrate Independence Day on the 16th; the final hospitality offered was a luncheon at Xochimilco, with the chief of the Department of the Federal District as host.

The congress proved to be an important one in the annals of inter-American congresses. There was not a member of our delegation but who left with a higher appreciation of the scientific work that is being done in the Hispanic-American countries. More intimate personal ties were made between the several intellectual investigators of the various states. In this congress, more than any other that has been held up to this time, there was a definition of the contributions that could be made to science in common by the several nations. By common consensus this contribution is to be found in the fields surrounding archeology, ethnology, geography and history. Our appreciation of this position was emphasized by an official invitation tendered by Dr. Wallace W. Atwood on behalf of the United States Government when he invited to the second Pan-American Congress of Geography and History to be held in Washington, D. C., from October 14 to 19, delegates from Mexico and other Iberian American States.

CLOYD H. MARVIN
GEORGE WASHINGTON UNIVERSITY

SPECIAL ARTICLES

EXPERIMENTAL DISSOCIATION OF THE EFFECTS OF ANTERIOR PITUITARY GLANDS OF VARIOUS SPECIES ON THYROID AND OVARY[1]

SUBSTANCES present in anterior pituitary glands of various species induce the following changes in ovary and thyroid gland of the immature guinea pig: (1) An intensified growth and maturation of follicles, which reach a very large size; this is associated with a diminution in the usual degenerative changes in the granulosa of other follicles. This process may be followed by a rupture of follicles and formation of normal corpora lutea in certain cases. (2) The opposite effect, a rapid and generalized destruction (atresia) of follicles, often associated with slight increase in the size of remnants of theca interna which normally constitute

[1] From the Department of Pathology, Washington University School of Medicine, St. Louis, Mo. These investigations were carried out with the aid of a grant from the International Cancer Research Foundation and with the aid of a grant for research in science made to Washington University by the Rockefeller Foundation.