

# NOTES FROM AROUND THE WORLD

by LINUS PAULING

LINUS PAULING, chairman of Caltech's Division of Chemistry and Chemical Engineering, returned last month from a three-month trip around the world with Mrs. Pauling. The trip began in December, when the Paulings flew to Stockholm, where Dr. Pauling received the Nobel Prize in Chemistry for 1954.

The Paulings spent two weeks in Sweden and Norway, a week in Israel, six weeks in India, a few days in Thailand, and three weeks in Japan.

In Israel they visited the Weizmann Research Institute, Hebrew University in Jerusalem, the Technion (Institute of Technology) in Haifa, and the potash plant at Sodom on the Dead Sea. They spent Christmas Eve in Bethlehem—the customary complications in crossing the border from Israel to Jordan having been simplified somewhat to make this pilgrimage possible.

In India the Paulings were the guests of the Indian Government and the Indian Science Congress Association. Dr. Pauling gave three addresses at the Congress, which was held in Baroda during the first week of January. He and Mrs. Pauling also visited several of

the leading Indian universities and research institutes, including the new National Physical Laboratory in New Delhi, the National Chemical Laboratory in Poona, the National Road Research Institute in New Delhi, and the National Glass and Ceramics Research Institute in Calcutta.

During their three weeks in Japan the Paulings visited Tokyo University, Kyoto University, Osaka University, and a number of industrial plants. In Tokyo and Kyoto, Dr. Pauling gave public lectures, which were translated into Japanese, on the subject of the hemoglobin molecule in health and disease. The lectures were sponsored by the Asahi Press, publishers of a leading Japanese newspaper.

Although Dr. Pauling delivered more than fifty lectures on his trip, he and Mrs. Pauling still found time to see such sights as the Taj Mahal, the caves at Ajanta and Ellora, Elephanta, the burning ghats and temples in Benares, and the temples at Nara, Japan.

Some of Dr. Pauling's own notes and observations on the trip follow:

THE NOBEL CEREMONY in Stockholm was very impressive; I think that it must be one of the most impressive ceremonies held in the modern world.

The ceremonies began on Thursday, December 9, with a reception held by His Excellency the Royal High Chamberlain of Sweden, who is President of the Nobel Foundation. This was followed by a formal dinner held by the Secretary of the Swedish Academy.

On Friday the Nobel awards were made, by King Gustav Adolph, in the Concert Hall in Stockholm. Following this ceremony there was the Nobel Dinner

in the Gold Room of the Stockholm City Hall. A toast to the Nobel Laureates was proposed by the King. Each of the Laureates made a speech of appreciation. The guests then moved to the Blue Room, where a torch-light procession was held by the university students of Sweden. I had the honor of having been selected by the Nobel Laureates to give the response to the students for the whole group (page 17).

On Saturday afternoon I presented my Nobel lecture. In the evening we were guests of the King and Queen at dinner in the royal palace.

The visit to Stockholm ended with a large reception held in the American Embassy, on Monday.

Sweden is an impressive country. Sweden has a policy of making no alliances in peacetime and of remaining neutral in wars. Sweden has not been in a war for 140 years. The feeling of the Swedes is that they do not wish to risk the destruction of their country for no good purpose. The Swedish refusal to join NATO does not mean that the Swedes are pro-Russian; I think that they are to be classed among the non-extremist nations, together with India. Many Japanese, probably the majority, would also like to see Japan in this class.

The unwillingness of the Swedes to become involved in foreign entanglements expresses itself in many ways. I was made aware of one of these, when I stated that I should like to leave some of my Nobel Prize money in Swedish investments—it seemed only proper to me that I should do this, since the Nobel Foundation is a Swedish Foundation. I was told, however, that it is against the law for me to do this—that the only way in which it might be done would be with special permission of the Swedish government. The reason is that the Swedes do not want to have some other country interfering in Swedish affairs in order to protect the investments of its nationals.

### A visit with Nehru

Of the men whom I met on this trip I was most impressed by Premier Nehru of India. My wife and I had dinner with him, and heard him give three public addresses. Although he is the head of a great nation, he did not read his speeches from a manuscript, but spoke without notes. It was evident that he had thought deeply about the problem that he was discussing, so deeply that it was not necessary for him to refresh his memory with notes or to use a manuscript in order to express his opinions accurately. He gave me the impression of having great mental powers, excellent judgment, and complete sincerity. In my opinion Nehru is one of the greatest men in the world, and I think that future historians may well give him a major share of the credit for avoiding a third world war.

Nehru said that India's approach to peace is a positive, constructive approach, not a passive, negative, neutral approach. He expressed himself as being disturbed by the kind of strong language that statesmen now use. He said that if you seek peace you cannot go far in your search through warlike methods; you must be peaceful in your approach. He said that various countries, including also the Soviet Union, are obviously interested in finding ways out of the tangle of the Formosa problem and other problems, and in finding some way for a peaceful solution through conferences and diplomatic approaches.

Nehru said that both Britain and India are proud of the way in which the problem of the freedom of India was settled. This peaceful settlement of the

problem has changed the hostility of the two peoples into friendship.

A similar peaceful solution of the Pondicherry problem was also reached. The French withdrew from Pondicherry, which is now a part of India. This action has resulted in increased good relations between France and India.

The situation between Portugal and India is an unpleasant one, but Nehru has stated that India has no intention of using force in resolving it.

Nehru feels strongly that Red China should be admitted to the United Nations. He has pointed out that it is very odd for the United Nations not to recognize the existence of this major country, Red China. He has said that it is unreal to have a so-called representative of China in the United Nations who has nothing to do with the real China.

The Indian Government and people seem to be making great progress in improving conditions in India. I could see how rapid the progress is in science and technology. My wife and I visited some of the villages, and found the villagers to show great enthusiasm for the village improvement projects. In one village that we visited, which can be reached only by bullock cart or jeep (we traveled by jeep), the villagers had just completed construction of a small town meeting place, the first community project that they had ever carried out. They will be reimbursed by the Government for half of the cost of this building. They took advantage of our visit to ask my wife to lay the cornerstone of a schoolhouse—the first school in this village. In addition to the Government of India and local private agencies, such as the Mrs. Gandhi Fund, the Ford Foundation has been making significant contributions to the program of village improvement. I found that the Indian people were deeply appreciative of the efforts of the Ford Foundation in their behalf.

### Politics in Japan

The occurrence of national elections during our stay in Japan provided the opportunity for us to obtain a deeper insight into the feelings of the Japanese people about political questions than we had had before. The nature of the Japanese Government is determined by the membership of the House of Representatives. The four leading parties are the Liberals, the Democrats, the Right Socialists and the Left Socialists. The Liberals got 26 percent of the seats, the Democrats 40 percent, and the two Socialist parties, which are closely similar in their policies, 34 percent.

The two principal questions determining the balloting were the attitude toward Russia and Red China and the question of rearmament of Japan. All of the parties except the Liberals included in their platforms a promise to resume normal diplomatic relations with Russia and to develop trade with Russia and Red China. The 74 percent majority for these parties reflects the popular support of this proposal.

## ADVICE TO STUDENTS

*Response by Linus Pauling, as spokesman for all Nobel Laureates, to the university students of Sweden, holding a torchlight procession in the Blue Room of the Stockholm City Hall, on December 10, 1954.*

Young men and women:

On behalf of my colleagues, as well as myself, I thank you for your kind demonstration of friendship and respect.

I am reminded of my own students in California. They are much like you—I have observed that students, young people, are much the same all over the world—and that scientists are the same. There is a world-wide brotherhood of youth and science.

Perhaps, as one of the older generation, I should preach a little sermon to you, but I do not propose to do so. I shall, instead, give you a word of advice about how to behave toward your elders.

When an old and distinguished person speaks to you, listen to him carefully and with respect—but *do not believe him. Never put your trust in anything but your own intellect.* Your elder, no matter whether he has gray hair or has lost his hair, no matter whether he is a Nobel

Laureate, *may be wrong.* The world progresses, year by year, century by century, as the members of the younger generation find out what was *wrong* among the things that their elders said. So you must *always* be skeptical—*always think for yourself.*

There are, of course, exceptional circumstances: when you are taking an examination, it is smart to answer the questions not by saying what you think is right, but rather what you think the professor thinks is right. Arrhenius discovered that there is danger in being too original in one's Doctor's thesis.

You will have some great problems to solve—the greatest of all is the problem of war and peace. I believe that this problem has been solved, by the hydrogen bomb—that there will never again be a world war—the knowledge that a world war would mean world-wide destruction, perhaps the end of civilization, will surely now lead to permanent peace.

But it is *your* generation that will have the job of working out the means of preventing disaster, by developing safeguards against paranoiac demagogues who might make nations rabid; *you* will have this great job to do—and I am confident that you can do it.

This popular support is the result of the rather poor economic situation in Japan, where there is considerable unemployment. The condition was expressed by a speaker before the American-Japan Society in Tokyo in the words: "While Americans can be expected to defend their prosperous way of life, many Japanese do not know when their next meal is coming."

The other question, that of rearmament, is one about which many of the Japanese people whom I met have strong feelings. Although the Japanese constitution does not permit rearmament, a significant amount of rearmament has been brought about in Japan. Many people consider that this action is unconstitutional, and a move has been made to amend the constitution, which would require a two-thirds vote of the House of Representatives. The Liberals and Democrats supported this move, but it has been blocked by the vote of the people, since more than one third of the elected representatives (the two Socialist parties) are opposed to it.

The caliber of the scientific and technical people in Japan is very high. The quality of work done is

excellent, but Japanese scientists are handicapped by lack of financial support in the universities, which is a result of the poor economic condition of the country as a whole.

The universities, which are supported by the national Government, do not have large enough budgets to meet the need for higher education in Japan. During our stay there the entrance examinations were held. About ten times as many students took the examinations as could be admitted. Several professors spoke to me about their concern over the fact that a large number of thoroughly qualified students had to be denied admission to the universities. The same problem was discussed in the letters columns and on the editorial pages of the newspapers. The interest of Japanese people in science is indicated by the fact that at each of my lectures in Japan, held in auditoriums with 400 to 600 seats, hundreds of people were turned away, and overcrowding in the auditorium was so great in two cases as to cause some of the seats to be broken because of pressure from people trying to force their way in.