

Hungary & Eastern Europe - Sixty Years Ago A Press Review by a Hungarian Refugee

*„America is the country of waiting in line
in cafeterias.” – The Hungarian
Bishop delegation at Evanston
1955. 02. 15-28.*

A Cute Magazine Cover Horrified The Red Bishops

By Eugene Conda

Dr. Conda is a former European journalist now living in Washington.

FOUR HUNGARIAN Protestant bishops took the lead recently in a new kind of Red propaganda aimed at the United States.

The four—two Lutherans and two Calvinists—were members of a Hungarian delegation which attended the assembly of the World Council of Churches at Evanston, Ill., last August. The Lutherans were Laszlo Dezser and Lajos Veto; the Calvinists, Albert Bereczky and Janos Peter.

Bishop Bereczky gave well publicized lectures about his "sad American experiences." Bishops Peter, Dezser and Veto wrote articles about "the horrors of American life" and "the successes" of Iron Curtain churches at the Evanston assembly.

THE BISHOPS agreed that the fingerprinting and other preliminaries to obtaining their United States visas were the most mortifying experience of their lives. "Humiliating treatment reserved only for gangsters," they described it.

Bishop Bereczky reported indignantly that New York customs officers even examined his shaving brush and squeezed a tube of toothpaste in their search for Communist propaganda in the bishops' luggage.

"In Hungary," Bishop Dezser commented, "foreigners can go where they wish without being bothered by authorities."

Bishop Veto found fault with American food and food service.

"American cafeterias recalled production lines in factories," he said. "One of the slanders by the Western reactionary press about Communist countries is that there people wait in line for food in collective restaurants. The truth is that America is the country of waiting in line in cafeterias."

"You can get only canned food in the United States," he went on. "It is not possible to buy beer in bottles there; even this is delivered in canned form. Milk is sold in square paper boxes. American food is tasteless and is permeated with all kinds of unpleasant odors of fish, melted butter and food oil."

THE BISHOPS deplored the "savagery" of the American press, which they said is full of stories of murder, vice and flying saucers and of war propaganda. And they all cited the same horrible example in support of this charge.

Each of them described in his own way a picture on the cover of an unnamed American publication: "A father with two loaded guns terrorizing his young son in a sickbed and thus forcing him to take a bitter medicine."

The writer succeeded in identifying the picture which so horrified the Hungarian bishops. It was on the cover of American Weekly, and it showed a smiling young father kneeling at the bedside of his little boy, who was grimacing over a spoonful of castor oil. The father wore toy holsters and a toy sheriff's hat, and he was "terrorizing" the youngster with two cap pistols.

Bishop Bereczky was particularly upset over the ill-treatment of American children. He told of seeing a newsreel of babies "forced" to compete in a crawling contest, and he cited as typical the case of the Florida swimming instructor convicted of manslaughter in the death of his 5-year-old daughter for forcing her to dive from dangerous heights.

BISHOP BEREZKY was also shocked by the inscription on an Evanston war memorial which read: "1916-1919" and "1941." He protested: "Is it possible to proclaim with such ostentation chiseled in marble that World War II is not yet ended?"

Bishop Peter devoted an entire article published in many Hungarian newspapers

to the Evanston memorial, and concluded that the United States was suffering from war hysteria.

(George Tomlinson, head of the citizens' committee which raised funds for the Evanston monument, explained last week that no terminal date had been added because there still had been no official ending of the war with Germany. Moreover, he said, the shaft was in memory of men who had fallen in all conflicts since the Civil War, and the names of some 25 men killed in Korea had still to be added.)

Bishop Peter was convinced that the "bad attitude" of the American press toward the Hungarian delegates at Evanston was directed by the State Department, and Bishop Dezser was even more outspoken in his indictment of the Secretary of State.

"Secretary Dulles inadvertently blabbed out his hope of seeing the Evanston conference dominated by American propaganda," said Dezser. "Therefore he tried to exclude the 'Eastern churches' from the assembly. He mobilized against us the American Legion, that fascist organization of war veterans, and all kinds of European exiles. But he did not succeed..."

Dezser said that an American minister told him that his sermons were censored by police, and that an American engineer complained that he was always being bothered by FBI interrogators. "But all this could not prevent American sympathies toward us," the bishop added. "Many people came to see us secretly and shook our hands warmly in the absolute privacy of hotel elevators."

Bishop Dezser described the plight of the United States in the words of one of his American friends, a Protestant minister who now lives and works in Geneva, Switzerland. Dezser quoted the anonymous clergyman thus:

"The country before your eyes is no more that of Lincoln, but that of McCarthy. America is dominated by a hysteria of fear. No European country would live in such fear. The country is a total political and diplomatic failure. Nobody knows what to do."

"The American people normally are very dynamic, but now they are in a

state of wavering and great perplexity. President Eisenhower was elected on a program of peace and social progress. This has proved to be an empty illusion.

"Believe me, the American people have lost their faith in everybody; they are only anxious for their future. While reading a newspaper, the average American can do nothing but turn the chewing gum in his mouth."

The number of automobiles astonished Bishop Dezser, but he had an explanation for the phenomenon. "Americans sweat all their lives to pay for their cars and the mortgages on their homes," he said.

He also explained the use of parking meters: "Cops are paid by corporations owning parking meters for fining those who refuse to pay for their parking."

This instance of collaborationist clergymen preaching Red propaganda is not unique since the death of Stalin, and it coincides with the frequent mention of "religious" topics on Red broadcasts, with the astonishing authorization to celebrate Christmas and with rumors of the liberation of Cardinal Mindszenty. Stalin's heirs seem to be following the almost forgotten pattern of the Czars, who based their despotism on a close alliance between "sword and aspergillum" (a brush used to sprinkle holy water.)

Religious Worship Contrasts With Communist Training in Budapest Today



Women pray before a statue of the Virgin Mary in the Basilica of Budapest in spite of the fact that the Hungarian secret police check the identity cards of all worshipers.



This 15-year-old North Korean is one of many Asians brought to Hungary as part of their Communist education. He will learn railroad operations as well as Russian language.



Communist Plan to Lure Escapees Back to Homes

By Don Cook

MUNICH.—The satellite regimes of Eastern Europe in recent weeks have been stepping up their efforts to exploit the long delays and unenviable living conditions which escapees from the Iron Curtain encounter when they reach the West.

This policy represents a departure from the past, when escapees were either ignored or bitterly attacked by the Communist regimes they left behind. The new line, however, is typified by a letter which the Bulgarian Legation in Vienna recently mailed to Bulgarian escapees in Austria and Germany, and which quickly found its way into the hands of Counter-Intelligence Corps and Radio Free Europe officials.

"My dear Countryman," it began. "The legation of the People's Republic of Bulgaria esteems its duty to draw your attention to the fact that the benefits of the amnesty which has been decreed in Bulgaria (for escapees who voluntarily return) has expired. However, an extension is being granted, and it is time for you to appear at the legation and undertake the necessary steps in order to return to your fatherland and to your next of kin."

Similar efforts have been made among the Hungarians and the Czechs as well, and there is ample evidence that the

Communist regimes have carefully compiled lists of escapees or persons of eastern European origin, together with their present addresses, all over the world.

Letters similar to the Bulgarian effort have turned up in Holland, the United States, England, and in fact wherever refugees are living.

In fact the slow moving machinery by which escapees can eventually find their way to a new home provides good breeding ground for such propaganda, and it is surprising that the Communist countries have managed to stir up as little "redefection" as they have.

A "redefector" is of prime propaganda value to a Communist regime, since he can broadcast about how terrible things were in the West, make trouble for those who have escaped and exhort others to stay where they are.

A "redefector" might often be nothing but a "long-term agent" who is sent out, told to live the life of an escapee and stay quiet, and then eventually is called home as a propaganda move. Likewise there have been at least two recent kidnappings from refugee camps in Austria and one murder of a Russian refugee in Munich in what now seems certain to have been an M. V. D. job.

Poles Paid Field \$50,000 For Jailing Him 5 Years

By Joseph Newman

From the Herald Tribune Bureau
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LONDON, Feb. 18.—Hermann H. Field, American architect who was imprisoned for five years and two months in Communist Poland, said today that the Polish government gave him \$50,000 as compensation for his lost earnings and an additional

\$1,500 to cover the cost of his three-month convalescence in Switzerland. He appeared at a press conference, following his arrival here yesterday.

Mr. Field said that he was confined to the cellar of the Polish prison for most of his stay.

No Light on Noel

The forty-four-year-old Mr. Field maintained that he could shed no light on the mystery of his brother Noel, a former State Department employee who, together with his wife Herta, was held in a Hungarian prison for more than five years. In November, a month after Hermann Field was released by Poland as the victim of false charges, the Noel Fields were freed in Hungary.

Instead of following Hermann Field's example in returning to the West, the Noel Fields announced they were taking "asylum" in Hungary. It had been hoped that Hermann could explain why his brother chose to remain in the country which had imprisoned him as an American "spy." It was while searching for Noel that Hermann was arrested in Warsaw early in 1949.

Hermann Field, speaking for himself, denied he was a Communist. He also denied knowledge as to whether his brother was a member of the Communist party.

He admitted that, "like others in the past," he himself had agreed with "alleged positions" taken by the Communists. As examples, he cited opposition to the Nazis before and during World War II, and Communist sympathy for Czechoslovakia during its occupation by the Nazis.

Faces Reporters

Mr. Field faced fifty reporters and photographers in the modest home of his English in-laws in a London suburb. He was accompanied by his wife, Kate, who waged a five-year campaign to keep her husband's case before government officials and the general public. Their two sons, nine and eleven, also were present.

Asked what he thought of the Communist regime, Mr. Field said, "After what I've been through, there is no doubt of my attitude. Their method is not the Dale Carnegie method of making friends and influencing people."

However, Mr. Field was restrained in his criticism of the Polish government, which he said suspected him of being part of an alleged Anglo-American plan to subvert the post-World War II Czechoslovak regime. He was suspected, he said, because of work he had done in Krakow in 1939 on behalf of Czech refugees from the Nazis.

"As Poland has by now discovered," he said, "this was not the case and I have never been an agent for anybody."

A reporter expressed surprise that Mr. Field, immediately after his release in October, did not rush to denounce before the world the injustice he had suffered.

Complications

Mr. Field indicated that the problem was more complicated and more difficult than might be realized by persons who had not been cut off from the outside world as he had. He compared himself to Rip Van Winkle and suggested that it took time to adjust to a new world.

When he was informed by the Polish authorities that his imprisonment was all a "mistake," Mr. Field said he received the news with a deadpan expression.

In a situation such as this, he said, "you learn not to react until after you get out."

Having been isolated so many years, he said, when he first was released he found it difficult to be in the same room with two or three persons and "felt a horror of the noise of life."

Mr. Field attributed his release to three factors: the death of Josef Stalin and the change in policy which spread from Moscow to the satellite capitals, a shakeup in the Polish police in 1954, and the disclosure of his arrest by Josef Swiatlo, a former Polish secret police official, following the latter's escape to the West.

Books to Finish

Mr. Field said he would stay in London to finish two books which he started with a fellow prisoner while in jail, and would then try to re-establish himself as an architect.

Before going to Prague and Warsaw in search of his brother, who had vanished in Prague in 1949, Mr. Field was working as an architect in Cleveland. He may return later to the United States.

In a formal statement to the press Mr. Field appealed to the Soviet authorities to release Noel Field's adopted daughter, Mrs. Robert (Erica) Wallach, who was arrested by the Soviet authorities in the Russian sector of Berlin when she went there in search of her foster father. Mrs. Wallach, whose husband is an American, is believed to be in the Soviet slave labor camp at Vorkuta.

How Reliable Are Red Satellite Armies?

Stretched from the Baltic to the Balkans are 83 satellite army divisions available for any task which the new get-tougher-with-the-West leadership of the Kremlin may devise—or, at least, so the Soviet Union hopes.

As a matter of fact, the very existence of these satellite armies is considered by authoritative observers as the most significant reason why the Communists can afford to act so belligerently toward the West.

But it is also because they are satellite forces that may explain why the Soviet cannot now, and may never, be able to launch with assuredness a successful, aggressive offense against the West.

Since the outbreak of the Korean war, the Russians have directed a massive re-equipping and expansion of their satellite armies.

There seems to be little doubt today that these armies are equipped with new arms, good uniforms, and from good to excellent supporting air and sea forces.

Yet they still pose an imponderable question to their Kremlin masters. How trustworthy are these forces?

10 Years of Doubt

The recently organized Assembly of Captive European Nations, a coalition committee of practically every type of movement in exile, insists that the satellite forces are so undependable that for at least another generation of soldiers—10 years—the Communists will never dare turn them loose.

In building up satellite forces the Soviets have engaged in consistent violation of every peace treaty limitation on the armaments of the captive nations.

These flagrant violations have taken place over exactly that period in recent world history when the Soviet Union has engaged in its most virulent, frenetic charges against the United States and her defensive pacts with friendly nations.

How They Line Up

The following estimates of the military situation in each of the captive nations are based upon the most reliable figures available through a number of both public and secret sources to the Assembly of Captive European Nations.

BULGARIA: The Bulgarian treaty authorizes a land army, including frontier troops, of 55,000 men, and additional air and navy forces of 10,500.

But the Bulgarians have: Five armies totaling some 150,000 men, including three armored divisions using Soviet tanks; a militia and frontier guard of 135,000, a special "Taifun," for the suppression of

By G. H. Irving

underground resistance, of 70,000, and a "Doso" or "Voluntary Organization for Co-operation and Defense" of 250,000. Total ground troops, without DOSO, 330,000. In addition, all sports clubs and youth organizations undergo semimilitary training.

Airfields have been modernized for use by jets and heavy bombers.

HUNGARY: Article 12 of the peace treaty with Hungary authorizes a total strength of 65,000 and 90 aircraft.

Hungarian land forces now consist of 250,000 troops, including reserves and some trained but as yet unassigned armored regiments. In addition the Hungarians have a special border guard of 44 battalions, a river flotilla and an air force that consists of a fighter division of more than 500 planes, including long-range bombers.

Every able-bodied male, from 6 to 60, is enrolled in some type of para-military organization.

ROMANIA: Peace treaty restrictions limited Romanian forces to 138,000 men.

At the end of 1953 the Romanian forces included 300,000 in the regular army, navy and air force. Reserve army forces totaled about 135,000. So-called "interior" or special forces, such as boundary guards and security troops, include another 325,000 men, with at least another 1.5 million boys and girls under military age enlisted in para-military youth forces.

CZECHOSLOVAKIA: Total strength of regular forces, including motorized divisions, is 190,000. An estimated 1 million men could be called up as trained reserves. Air force strength includes seven divisions, with equipment ranging from MIG-15s, propeller-driven La-5s and 7s, to IL-10 bombers. Special units, including militia, have a strength of over 110,000 men.

Czechoslovakia is a special source of strength for the Soviets, and a more dependable strength than manpower—equipment.

The Communists have turned Czechoslovakia into a secondary arsenal with fantastic requirements on the industrial economy to produce armaments for other satellite nations and for the Soviet Union itself.

Indeed, the Assembly says it is perfectly confident that the Communist Minister of National Defense was quite correct when, in June, 1954, he bragged that "in consequence of special measures . . . a new, modern armament industry has virtually come into being in the last three years."

POLAND: According to latest data, there are about 500,000 draftees

in the army, navy and air forces. In addition, there are some 515,000 soldiers and officers in police and security organizations.

Soviet forces, themselves, also are stationed in Poland. An estimated 80,000 soldiers are concentrated in the area of Silesia; Soviet air forces are located "in strength" in Poland.

BALTIC STATES: The national identity of the armies of Latvia, Estonia and Lithuania was completely eliminated with the destruction of those former republics. However, the Soviet has large forces in all three areas. There are from 6 to 10 divisions and one NKVD division in Latvia. It is estimated that about 250,000 men in eight divisions of a "Polar army"—presumably snow-fighters—are located in Estonia. Soviet strength in Lithuania includes some 120,000 ground forces and 10 airfields.

Soviet Organization

In addition to maintaining large satellite forces, the Russians have reorganized all captive armed forces along Soviet lines, including the presence of secret police and political commissars.

The Russian language is a required course of study for virtually all satellite troops and para-military organizations.

Experts within the Assembly for Captive European Nations are divided as to the reasons behind this. Some feel the Russians are merely trying to inculcate satellite troops with admiration for their Soviet masters.

Others, however, are convinced the real reason is more sinister, yet more reasonable: The Soviet wants no impediments to making full use of these troops in event of war. Thus, by using Soviet weapons, wearing Soviet uniforms and studying Soviet military techniques, they can be incorporated at any time anywhere within the Soviet military structure.

With an understanding of basic Russian these troops also can be broken up and reincorporated into Soviet units if they prove unreliable in combat.

In most satellite forces, the officers are natives of proven Communist enthusiasm. Poland is the outstanding exception. All officers above the rank of major in the army or commander in the navy are Russians.

In effect, the Soviet Union has achieved with the satellite countries a goal that the West still is trying to reach with respect to the armies of the NATO countries. But with one vital difference.

There is no doubt from the highest general to the lowest private where the loyalty of the NATO armies lies. The Kremlin has no such assurances with its satellite armies today.

The New York Times

February 22, 1955

WEST'S RECORDS SWEEP HUNGARY

Long Playing Disk Utilized in
Halls, Homes and on Radio
in Lieu of Live Concerts

BUDAPEST, Hungary, Feb. 21 (AP)—Classical records from the West are sweeping Communist Hungary. Radio broadcasts from Western Europe long have been popular, but the exciting new boon to music-lovers is the long playing disk.

The record invasion started as private enterprise. Soon after the war, followers of classical music learned they could hear fine singing, not only at the Budapest Opera, but on records in certain private houses—for a small fee. Soon, the modest apartments of "capitalist" concert givers became too small; "audiences" were sitting on the floors, happily listening to the New York Philharmonic-Symphony and La Scala Opera.

The state, recognizing the cultural and business possibilities of this hobby, took it over two years ago. Today, two concert halls in Budapest devote four days a week to the recorded concerts.

Some long playing records are imported from Russia and Czechoslovakia, and the Government has collected the finest records manufactured in the West.

For the Price of a Beer

The official concerts are well organized. Listeners sit in comfortable chairs and experts and critics lecture on the works being performed—all this for the price of a glass of beer.

The council of Budapest's Third District, a neglected part of the city inhabited by workers and the lower middle class, opened its own "cultural home" last month to present recorded performances of such classics as "Aida," "Madama Butterfly" and "La Traviata." A big industrial plant, not content with providing records, built a miniature stage to show its employees how operas look as they are performed. The Soviet Union's "House of Books" in Budapest has started advertising its own records—and Western works such as "Faust" and "Don Giovanni."

The number of private record collectors is increasing rapidly. No one can order records from abroad, because the authorities would not free dollars for such purposes. Apparently, many persons have friends and relatives outside the country who supply them with disks. The Government has increased customs duties on these: the duty on a twelve-inch record is the equivalent of \$5.80.

Sent Noted Musicians

Such a rage for good music would not have been surprising before the war. Well-to-do Hungarians made a habit of going to Vienna to attend musical performances, and a steady stream of stars came from abroad. Many persons here are still proud that such noted performers as Joseph Szigeti, the violinist, and Eugene Ormandy, Fritz Reiner and George Szell, the conductors, came from Hungary.

Today, Vienna is farther away than at any time in history, and Western musicians no longer come. However, broadcasts from abroad are popular, although the programs are never listed. Budapest Radio has its own classical programs, the capital's two opera houses always are packed, and there is a concert somewhere every night, with tickets regularly sold out weeks in advance.

The Washington Post
and Times Herald

Feb

Praise Heaped on Los Alamos

Dr. Teller Credits Many As 'Fathers' of H-Bomb

By Alfred Friendly
Staff Reporter

Dr. Edward Teller, famed as the "Father of the H-bomb," has written a history to prove that the fusion weapon actually had scores of "fathers."

His remarkable article appears today in the authoritative magazine, *Science*, publication of the American Association for the Advancement of Science. The 8500-word piece is the first detailed comment by the brilliant scientist on the bitterly controversial episode in which he was a principal character.

In part, it appears to be an attempt to salve some of the smarting wounds left over from that era. It is also his defense, and finally it is his disclaimer of the transcendent credit for the achievement which some of his noisiest partisans have endowed him with.

"At the present time," Teller writes, "I find myself unhappily in a situation of being given certainly too much credit and perhaps too much blame for what has happened."

He pleads for unity among the scientists who were so fiercely divided in the conflict



EDWARD TELLER

about him and the man against whom he testified, J. Robert Oppenheimer.

Noteworthy in his account is his repudiation of the thesis

that the Atomic Energy Commission's weapons laboratory at Los Alamos, N. Mex., blocked the development of the H-bomb. Instead, Teller heaps praises on Los Alamos and gives it and its scientists complete and lavish credit for doing the job.

Los Alamos' director, Norris Bradbury, whom Teller's most vocal eulogizers have denounced, comes in for the highest praise from Teller himself.

Except for one self-recrimination, Teller has harsh words for no one, not even Oppenheimer, the man with whom he waged an epic battle over the H-bomb and the outstanding figure in the atomic field until he was denied secret clearance last year.

In apportioning credit for the thermonuclear weapon, Teller mentions no fewer than 50 scientists who worked directly on the problem. Their names, deriving from a host of races and national origins, testify to the American melting pot—Gamow, a Russian escapee; Von Neumann, like Teller, a Hungarian; Turkevitch, Argo, Chew, Wheeler, Bethe, Richtmyer, Rosen. See **TELLER**, Page 15, Col. 1

February 25, 1955

Dr. Teller Shares Credit for H-Bomb With

TELLER—From Pg. 1

bluth, Metropolis, Konopinski, Nordheim, Van Vleck, Serber, Hurwitz, Landshoff, Goranson, Mark, Froman, Graves.

Here is Teller's thesis: "A modern technical and scientific development is rightly considered a wonderfully complex and difficult undertaking... Hundreds of ideas and thousands of technical skills are required for success. The hydrogen bomb is an achievement of



Marvin deHoffmann

this kind. It is the work of many excellent people who had to give their best abilities for years and were all essential for the final outcome. "The story that is often presented to the public is quite different. One hears of a brilliant idea and only too often the name of a single individual is mentioned. This picture is both untrue and unjust... The "single" individual in this case is clearly Teller him-

self. He was the driving force who became interested in trying to develop a fusion reaction as early as 1942, when major emphasis was centered on effecting a fission (A-bomb) reaction. He persisted with his aim after the war and engaged in a monumental fight with Oppenheimer, the majority of the AEC and its scientific advisers on this point. This was in the fall of 1949 when it was learned the Russians had exploded an atomic bomb.

Finally, winning his point, he made a brilliant and inspired suggestion—the exact nature of which has never been disclosed—which revolutionized the scientific approach to the problem and ultimately resulted in the thermonuclear (fusion, or H-bomb) weapon in 1952.

Disunity Called a Danger

The acrimony of the period 1945-52 is the background for Teller's article, although he refers to it only obliquely.

"I feel that the development of the hydrogen bomb," he says, "should not divide those who in the past have argued about it but rather should unite all of us who in a close or distant way, by work or by criticism, have contributed toward its completion. Disunity of the scientists is one of the greatest dangers for our country."

The fight to which Teller referred was chronicled most explicitly in the 1954 AEC hearings over Oppenheimer's future clearance for atomic secrets. Oppenheimer's initial opposition to an attempt to make the thermonuclear weapon appeared to be a major factor in the final decision.

Teller appeared as a witness adverse to Oppenheimer. The latter's partisans, who numbered a majority of atomic scientists and most of the distinguished figures in the field, were furious at Teller.

The tense and ugly situation was made worse when Washington newsmen James R. Shepley and Clay Blair, Jr., pro-



(Western High School yearbook photo, 1940)

GEOFFREY CHEW

duced a book, "The Hydrogen Bomb, in which Teller emerged as an almost-more-than-human hero. The villains were Oppenheimer, against whose loyalty the insinuations were strong, the Los Alamos group, and its director, Bradbury.

The book was vehemently denounced again by atomic science leaders, as wildly inaccurate and distorted. Almost alone among his colleagues, Teller withheld comment except for a statement which received only local publicity, praising Los Alamos.

From all this, bitterness in the scientific community ran high against Teller. It is said that he is deeply distressed by it.

Against that backdrop, Teller's history of the H-bomb, titled "The Work of Many People," takes much of its significance.

Russian Interest Recalled

Teller begins with the story of the renowned Washington scientist, Prof. George Gamow of George Washington University. Six years before he escaped from Russia in 1933, Gamow delivered a paper summarizing theories that the sun's energies derived from nuclear reactions. When he finished, a high Soviet official, Nikolai Bucharin, later executed as a "deviationist," approached Gamow, asked whether the process could be harnessed on earth, and offered him facilities to work on the task. Gamow said the job was impractical, but kept in mind the Russian interest.

In America, Gamow "stirred up" American physicists on the problem of thermonuclear reactions, although with no idea of practical applications. Following a 1938 conference at George Washington University and the Carnegie Institution here, Gamow, Charles Critchfield and Hans Bethe established the way in which the heat of the sun and stars comes from thermonuclear, or fusion, reactions.

With the discovery of atomic fission in 1938, scientists began to speculate whether the intense heat fission created could be used to ignite a fusion reaction.

Suggestion by Fermi

Teller relates that in 1942 Enrico Fermi, the late Nobel Prize winner, proposed to him consideration of the reactions of heavy hydrogen (deuterium) in the fusion process, rather than the more abundant, nor-

mal, than they had expected, if not impossible. Moreover, the A-bomb work was proving harder than anticipated, but it had to be built.

"That it was done in time to have an influence upon the war was to a great extent due to the leadership of our director, Oppenheimer," Teller writes. "He knew what was going on in every corner of the big laboratory and was prompt both in his understanding and his encouragement... We had to win the war and there was not time for the Super (nickname of the H-Bomb)."

Nevertheless, Oppenheimer, Fermi and others wanted to find out if the H-bomb was feasible and in early 1945 a small group began to concentrate on the problem.

Two George Washington students, Geoffrey Chew and Harold Argo, interrupted their studies to join the group. Others who contributed were Anthony Turkevich, Rolf Landshoff, a refugee from Germany, two mathematicians, Stan Ulam and Jack Calkin, and another,



NORRIS E. BRADBURY

Nicholas Metropolis, who became interested in the computing machines that later were to be so important in solving the problem. John von Neumann, the famed mathematician who is now a nominee for membership on the AEC, also helped out.

Konopinski, aided by Cloyd Marvin, Jr., physicist son of the president of George Washington University, "completed a strange and important task." It was the proof that an H-bomb would not spread to ignite the air and water on the globe.

Stayed on the Job

After the war, Teller recounts, it seemed likely that Los Alamos would be abandoned. A few determined people kept it alive.

"The man whose leadership was crucial in those days was the new director, Norris Bradbury... Without his dedicated work the Russians would now be ahead of us in the atomic race."

Like most others, Teller left Los Alamos to return to academic work. Most scientists who stayed had to work on next steps in atomic weapons. A small group, headed by Robert Richtmyer, "kept the spark (of the H-bomb idea) alive." Work went slowly, with most progress coming in learning the use of the new electronic computers, such as ENIAC and MANIAC.

With the Russian atomic explosion, came a crisis of decision. Teller makes little refer-



HAROLD ARGO

heim of Duke University, John Wheeler of Princeton, Fermi, von Neumann, Ulam and many others.

Ulam, Teller relates, completed a hand computation on one problem faster than the machine ENIAC. "In a real emergency, the mathematician still wins—if he is really good," says Teller.

The trouble was, however, that Ulam's computation was "most discouraging" and ENIAC's later results made clear "that the plans which we had considered most hopeful had to be revised."

One can guess from Teller's account that Ulam's "discouraging" computation meant that dor-

In these automatics, no

omb With Many Others as 'Fathers'



HAROLD ARGO

a new approach was needed if a real fusion explosion was to be successful. More calculations by Wheeler at Princeton, "an imaginative suggestion by Ulam," and a fine calculation by de Hoffmann seem to have aided the new attack.

At this time, it is believed, came Teller's own revolutionary suggestion that led to success. Teller does not mention it directly, but it is a good guess, from other evidence, that de Hoffmann's "fine calculation" concerned Teller's idea. Here is all that Teller says about it:

"I cannot refrain from mentioning one particularly human detail in de Hoffmann's work. Since I had made the suggestion that led to his calculation, I expected that we would jointly sign the report containing the results.

"Freddie (de Hoffmann), however, had other plans. He signed the report with my name only and argued that the suggestion counted for everything and the execution for nothing. I still feel ashamed that I consented."

There were more calculations, and the new direction of attack was taken up at the now famous meeting with Oppenheimer and others at Princeton in the spring of 1951. At that meeting, "everyone clearly recognized that with a little luck, only a great deal of hard work stood between us and final success."

Edward U. Condon invited the group to use SEAC, the computing machine at the Bureau of Standards, which Condon then directed. MANIAC



Graves



Bethe



Critchfield



Gamow

also came into operation. Bethe came to Los Alamos to double check during the critical months.

When the time came to test "Mike," the first full-scale fusion device, Teller had begun to set up the Livermore laboratory, separate from Los Alamos, and felt he could not leave to witness the affair. He "attended" in another way—in front of the sensitive seismograph at Berkeley.

The instrument which records earth shock shows its results by a fine beam of light on a photographic plate. When Teller came into the dark room, on the morning of November 1, 1952, he found the light wavering, but he knew this was the result of the movement of his eyes, which had nothing to steady them in the darkness.

He braced a pencil before his eyes near the bright spot. He waited with impatience during the 15 minutes it would take from the time of the actual shot for the shock waves to travel under the Pacific from Eniwetok to California.

"At last the time signal came that had to be followed by the shock from the explosion, and there it seemed to be: The luminous point appeared to dance wildly and irregularly. Was it only that the pencil which I held as a marker trembled in my hand?

"I waited for many more minutes to be sure that the record did not miss any of the shocks which might follow the first. By that time I had almost convinced myself that I must have been mistaken and that what I saw was the motion of my own hand rather than the signal from the first hydrogen bomb.

"Then the trace appeared on the photographic plate. It was clear and big and unmistakable. It had been made by the wave of compression that had traveled for thousands of miles and brought positive assurance that 'Mike' was a success."

In all of this, Teller concludes, he claims credit in one respect only: "I believed and continue to believe in the possibility and necessity of developing the hydrogen bomb."

heim of Duke University, John Wheeler of Princeton, Fermi, von Neumann, Ulam and many others.

Ulam, Teller relates, completed a hand computation on one problem faster than the machine ENIAC. "In a real emergency, the mathematician still wins—if he is really good," says Teller.

The trouble was, however, that Ulam's computation was "most discouraging" and ENIAC's later results made clear "that the plans which we had considered most hopeful had to be revised."

One can guess from Teller's account that Ulam's "discouraging" computation meant that