There were a few children born in the last six months
Before the end of the war, so there's still some hope.
But they're almost grown. That's the trouble. They're almost grown.

Well, we had a long run. That's something. At first they thought
There might be a nation somewhere—a savage tribe.
But we were all in it, even the Eskimos,
And we keep the toys in the stores, and the colored books,
And people marry and plan and the rest of it,
But, you see, there aren't any children. They aren't born.

[1938]

The Voice of the Dolphins

On several occasions between 1960 and 1985, the world narrowly escaped an all-out atomic war. In each case, the escape was due more to fortuitous circumstances than to the wisdom of the policies pursued by statesmen.

That the bomb would pose a novel problem to the world was clear as early as 1946. It was not clearly recognized, however, that the solution of this problem would involve political and

technical considerations in an inseparable fashion. In America, few statesmen were aware of the technical considerations, and, prior to Sputnik, only few scientists were aware of the political considerations. After Sputnik, Dr. James R. Killian was appointed by President Eisenhower, on a full-time basis, as chairman of the President's Science Advisory Committee, and, thereafter, a number of distinguished scientists were drawn into the work of the Committee and became aware of all aspects of the problem posed by the bomb.

Why, then, one may ask, did scientists in general, and the President's Science Advisory Committee in particular, fail to advance a solution of this problem during the Eisenhower administration? The slogan that "scientists should be on tap but not on top," which gained currency in Washington, may have had something to do with this failure. Of course, scientists could not possibly be on top in Washington, where policy, if it is made at all, is made by those who operate, rather than by those who are engaged in policy planning. But what those who coined this slogan, and those who parroted it, apparently meant was that scientists must not concern themselves with devising and proposing policies; they ought to limit themselves to answering such technical questions as they may be asked. Thus, it may well be that the scientists gave the wrong answers because they were asked the wrong questions.

In retrospect, it would appear that among the various recommendations made by the President's Science Advisory Committee there was only one which has borne fruit. At some point or other, the Committee had recommended that there be set up, at the opportune time, a major joint Russian-American research project having no relevance to the national defense, or

to any politically controversial issues. The setting up in 1963 of the Biological Research Institute in Vienna under a contract between the Russian and American governments was in line with this general recommendation of the Committee.

When the Vienna Institute came to be established, both the American and the Russian molecular biologists manifested a curious predilection for it. Because most of those who applied for a staff position were distinguished scientists, even though comparatively young, practically all of those who applied were accepted.

This was generally regarded at that time as a major setback for this young branch of science, in Russia as well as in America, and there were those who accused Sergei Dressier of having played the role of the Pied Piper. There may have been a grain of truth in this accusation, inasmuch as a conference on molecular biology held in Leningrad in 1962 was due to his initiative. Dressier spent a few months in America in 1960 surveying the advances in molecular biology. He was so impressed by what he saw that he decided to do something to stimulate this new branch of science in his native Russia. The Leningrad Conference was attended by many Americans; it was the first time that American and Russian molecular biologists came into contact with each other, and the friendships formed on this occasion were to last a lifetime.

When the first scientific communications came out of the Vienna Institute, it came as a surprise to everyone that they were not in the field of molecular biology, but concerned themselves with the intellectual capacity of the dolphins.

That the organization of the brain of the dolphin has a complexity comparable to that of man had been known for a long time. In 1960, Dr. John C. Lilly reported that the dolphins might have a language of their own, that they were capable of imitating human speech and that the intelligence of the dolphins might be equal to that of humans, or possibly even superior to it. This report made enough of a stir, at that time, to hit the front pages of the newspapers. Subsequent attempts to learn the language of the dolphins, to communicate with them and to teach them, appeared to be discouraging, however, and it was generally assumed that Dr. Lilly had overrated their intelligence.

In contrast to this view, the very first bulletin from the Vienna Institute took the position that previous failures to communicate with the dolphins might not have been due to the dolphins' lack of intellectual capacity but rather to their lack of motivation. In a second communiqué the Vienna Institute disclosed that the dolphins proved to be extraordinarily fond of Sell's liver paste, that they became quickly addicted to it and that the expectation of being rewarded by being fed this particular brand of liver paste could motivate them to perform intellectually strenuous tasks.

A number of subsequent communiqués from the Institute concerned themselves with objectively determining the exact limit of the intellectual capacity of the dolphins. These communiqués gradually revealed that their intelligence far surpassed that of man. However, on account of their submerged mode of life, the dolphins were ignorant of facts, and thus they had not been able to put their intelligence to good use in the past.

Having learned the language of the dolphins and established communication with them, the staff of the Institute began to teach them first mathematics, next chemistry and physics, and subsequently biology. The dolphins acquired knowledge in all of these fields with extraordinary rapidity. Because of their lack of manual dexterity the dolphins were not able to perform experiments. In time, however, they began to suggest to the staff experiments in the biological field, and soon thereafter it became apparent that the staff of the Institute might be relegated to performing experiments thought up by the dolphins.

During the first three years of the operation of the Institute all of its publications related to the intellectual capacity of the dolphins. The communiqués issued in the fourth year, five in number, were, however, all in the field of molecular biology. Each one of these communiqués reported a major advance in this field and was issued not in the name of the staff members who had actually performed the experiment, but in the name of the dolphins who had suggested it. (At the time when they were brought into the Institute the dolphins were each designated by a Greek syllable, and they retained these designations for life.)

Each of the next five Nobel Prizes for physiology and medicine was awarded for one or another of these advances. Since it was legally impossible, however, to award the Nobel Prize to a dolphin, all the awards were made to the Institute as a whole. Still, the credit went, of course, to the dolphins, who derived much prestige from these awards, and their prestige was to increase further in the years to come, until it reached almost fabulous proportions.

In the fifth year of its operation, the Institute isolated a mutant form of a strain of commonly occurring algae, which excreted a broad-spectrum antibiotic and was able to fix nitrogen. Because of these two characteristics, these algae could be grown in the open, in improvised ditches filled with water, and they did not require the addition of any nitrates as fertilizer. The protein extracted from them had excellent nutritive qualities and a very pleasant taste.

The algae, the process of growing them and the process of extracting their protein content, as well as the protein product itself, were patented by the Institute, and when the product was marketed—under the trade name Amruss—the Institute collected royalties.

If taken as a protein substitute in adequate quantities, Amruss markedly depresses the fertility of women, but it has no effect on the fertility of men. Amruss seemed to be the answer to the prayer of countries like India. India had a severe immediate problem of food shortage; and she had an equally severe long-term problem, because her population had been increasing at the rate of five million a year.

Amruss sold at about one tenth of the price of soybean protein, and in the first few years of its production the demand greatly exceeded the supply. It also raised a major problem for the Catholic Church. At first Rome took no official position on the consumption of Amruss by Catholics, but left it to each individual bishop to issue such ruling for his diocese as he deemed advisable. In Puerto Rico the Catholic Church simply

chose to close an eye. In a number of South American countries, however, the bishops took the position that partaking of Amruss was a mortal sin, no different from other forms of contraception.

In time, this attitude of the bishops threatened to have serious consequences for the Church, because it tended to undermine the institution of the confession. In countries such as El Salvador, Ecuador, Nicaragua and Peru, women gradually got tired of confessing again and again to having committed a mortal sin, and of being told again and again to do penance; in the end they simply stopped going to confession.

When the decline in the numbers of those who went to confession became conspicuous, it came to the attention of the Pope. As is generally known, in the end the issue was settled by the papal bull "Food Being Essential for Maintaining Life," which stressed that Catholics ought not to be expected to starve when food was available. Thereafter, bishops uniformly took the position that Amruss was primarily a food, rather than a contraceptive.

The income of the Institute, from the royalties collected, rapidly increased from year to year, and within a few years it came to exceed the subsidies from the American and Russian governments. Because the Institute had internationally recognized tax-free status, the royalties were not subject to tax.

The first investment made by the Vienna Institute was the purchase of television stations in a number of cities all over the world. Thereafter, the television programs of these stations carried no advertising. Since they no longer had to aim their

programs at the largest possible audience, there was no longer any need for them to cater to the taste of morons. This freedom from the need of maximizing their audience led to a rapid evolution of the art of television, the potential of which had been frequently surmised but never actually realized.

One of the major television programs carried by the Amruss stations was devoted to the discussion of political problems. The function of *The Voice of the Dolphins*, as this program was called, was to clarify what the real issues were. In taking up an issue, *The Voice* would discuss what the several possible solutions were and would indicate in each case what the price of that particular solution might be. A booklet circulated by *The Voice of the Dolphins* explained why the program set itself this particular task, as follows:

Political issues were often complex, but they were rarely anywhere as deep as the scientific problems which had been solved in the first half of the century. These scientific problems had been solved with amazing rapidity because they had been constantly exposed to discussion among scientists, and thus it appeared reasonable to expect that the solution of political problems could be greatly speeded up also if they were subjected to the same kind of discussion. The discussions of political problems by politicians were much less productive, because they differed in one important respect from the discussions of scientific problems by scientists: When a scientist says something, his colleagues must ask themselves only whether it is true. When a politician says something, his colleagues must first of all ask, "Why does he say it?"; later on they may or may not get around to asking whether it happens to be true. A politician is a man who thinks he is in possession

of the truth and knows what needs to be done; thus his only problem is to persuade people to do what needs to be done. Scientists rarely think that they are in full possession of the truth, and a scientist's aim in a discussion with his colleagues is not to persuade but to clarify. It was clarification rather than persuasion that was needed in the past to arrive at the solution of the great scientific problems.

Because the task of *The Voice* was to clarify rather than to persuade, *The Voice* did not provide political leadership, but by clarifying what the issues were in the field of politics *The Voice* made it possible for intellectual leadership to arise in this field.

A number of political scientists were invited to join the Institute at the time when *The Voice of the Dolphins* went into operation, and the first suggestion of the dolphins in the political field was made one year later. At that time, the dolphins proposed that the United Nations set up a commission in every South American capital and that these commissions function along the lines of the U.N. Commission that had been in operation in Bolivia since 1950. That commission was advising the Bolivian government on all matters pertaining to the economic welfare of the nation; in addition, it made available trained personnel on whom the Bolivian government could draw, if it wanted to put into effect any of the commission's recommendations.

This proposal of the dolphins was generally regarded as wholly unrealistic. It was pointed out that the governments of the South American nations did not operate in a vacuum, but were subject to political pressures from private interests. It was

freely predicted, therefore, that any attempt on the part of a U.N. commission to influence the action of the government to which it was accredited would be frustrated by the influence of the private interests, no matter how sound the advice might be. But such was the prestige of the dolphins that their proposal, formally submitted to the United Nations by Uruguay, was adopted by a two-thirds majority of the General Assembly, after it had been vetoed in the Security Council.

Still, the skeptics might well have turned out to be right, had it not been for the activities of the "special agencies" which the Vienna Institute established in every one of the South American capitals where a U.N. commission was in operation. Even though these special agencies had no policy of their own other than to support the proposals of the local United Nations commissions, and even though they operated on a rather limited budget—none spent more than $15 million a year—without their activities the U.N. commissions could not have achieved their ambitious goals in South America. The amounts which these "special agencies" spent, small though they were, were effective because they were spent exclusively for the purpose of bribing the members of the government in office to do what was in the public interest, rather than to yield to the pressures of private interests.

Had it not been for the extra income that the Vienna Institute derived from the sale of Amruss, its activities would have come to an end in 1970, at the time of the Communist revolution in Iraq, when all Russian-American contracts were canceled and the Institute lost its government subsidies.

In order to make the subsequent events fully understandable

to the reader it is necessary to make him aware of the change that the character of the so-called atomic stalemate underwent between 1960 and 1970.

Between 1962 and 1965 the world passed through an agonizing transitional phase in the atomic stalemate. At the beginning of this period America had still to rely mostly on bombers, based on airfields located in the proximity of Russia. Because of the possibility of a surprise attack which could have knocked out America's ability to strike a counterblow, the United States felt impelled to keep one third of her bombers in the air on an around-the-clock basis in times of crisis. Russia, on the other hand, had no foreign bases, nor was she in need of any, since she possessed an adequate stockpile of long-range rockets which could be launched from bases inside Russia and were capable of carrying hydrogen bombs large enough to demolish a city. By 1965 America had an adequate stockpile of such long-range rockets also, and thereafter she was no longer in need of foreign bases, either.

By 1965 America and Russia were capable of destroying each other to any desired degree. They both had long-range rockets mounted on trucks or railroad cars that were kept constantly on the move, and it would have been impossible for either country to destroy, by one single sudden blow, the power of the other to strike a devastating counterblow. With the fear of a surprise attack thus eliminated, the atomic stalemate began to gain a stability which it did not formerly possess.

At a time when America and Russia could have destroyed each other to any desired degree, the threat of massive

retaliation would have been tantamount to a threat of murder and suicide. Such a threat might be believable if it were made by a nation in a conflict in which its very existence was at stake, but it would not be believable if it were made by America in a conflict in which American interests were at stake, but not America's existence as a nation. In these circumstances America ceased to rely on long-range rockets and the large bomb for the defense of her national interests in case of an armed conflict. Instead, America planned to send troops to the area involved and to resist by using small atomic bombs against troops in combat, within the contested area.

In time, people in America came to understand well enough that the "real aim" of such a limited war could not be victory, which clearly would not be obtainable in every case, but, rather, the exacting of a price from the enemy. It was thought that if America were able to exact a price higher than the price which the enemy would be prepared to pay, then America's ability to fight a limited atomic war anywhere on the globe would effectively deter the enemy from attempting to change the map by force. It was recognized, of course, that America might have to be prepared to pay a price as high as she proposed to exact, not only in money but perhaps also in lives —the lives of the young men who would die in the fighting.

It was generally taken for granted that the large bombs and the long-range rockets would play no role in any of the foreseeable conflicts. They were kept as an insurance for the sole purpose of retaliating if Russia were to attack America with such bombs.

No one had any doubt that the revolution in Iraq, which caught America by surprise in 1970, was in fact Communist-inspired, and America responded promptly by landing troops in Lebanon and Jordan. This time America was determined to settle the issue of control of the Middle East and thus to end, once and for all, the threat that Western Europe might be cut off from its Middle East oil supply. Egypt and Syria declared that they would regard an invasion of Iraq by American troops as an attack against themselves. Turkish troops were poised to move into Syria, and Russia was concentrating troops on the Turkish border, for the purpose of restraining Turkey.

At this point America proclaimed that she was prepared to send troops into Turkey, to use small atomic bombs in combat against Russian troops on Turkish soil and, perhaps, also in hot pursuit beyond the prewar Turkish-Russian boundary.

It appeared that Russia strongly disliked the prospect of fighting an atomic war on her southern border. There was little assurance that such a war would not spread and finally end up in an all-out war, and rather than to take this risk Russia decided to adopt a strategy of another kind. In a note, which was kept very short, she proclaimed that she would not resist by force of arms in the Middle East an American invasion of that area, but would, rather, seek to "deter" America by setting a high price for such an invasion. The price would be set, however, not in terms of human life but solely in terms of property.

The Russian note listed twelve American cities by name. Russia stated that if American troops crossed over into Iraq she would single out one of these twelve cities, give that city four

weeks of warning to permit its orderly evacuation, as well as to allow time to make arrangements for the feeding and housing of refugees, and thereafter the city would be demolished with one single long-range rocket.

America replied in a note which was even shorter and intimated that for each city that Russia demolished in America, America would demolish two cities in Russia.

To this Russia replied in a second note—a note of unprecedented length—that if America were to demolish two cities in Russia for each city that Russia might have demolished in America, and if Russia were to demolish two cities in America for each city that America might have demolished in Russia, then the destruction of even one city would trigger a chain of events which would, step by step, lead to the destruction of all American as well as all Russian cities. Since clearly America could not possibly want this result, she should not make such a threat of "two for one" and expect it to be believed. Russia, on her part, would tolerate America's demolishing one Russian city, in return for Russia's having demolished one American city. But for each additional city that America might demolish, Russia would demolish one and just one additional city in America.

The note made it clear that even though Russia would abide by such a principle of "one for one," this did not mean that America would be free to demolish a large city in Russia in return for a small city demolished in America. What would count in this respect, the note stated, would be the size of the city, as expressed by the number of inhabitants rather than by the number of square miles covered by the city.

Twenty-four hours after this Russian note was received in Washington, the Division of Vital Statistics of the Vienna Institute issued a document which listed the number of inhabitants of all American and all Russian cities. In their preface the dolphins stated that if American troops were to invade Iraq, and Russia were to demolish one of the twelve cities she had listed, an undesirable controversy might arise on the issue of which American city was equal to which Russian city, unless an authentic list of the number of inhabitants was readily available.

This document was issued so promptly that it aroused Russian suspicion. The Russians thought that somehow the Vienna Institute might have had inside information about Russian intentions and thus been able to prepare in advance this list of cities. American and British statesmen had so often said that the Russians were unpredictable that finally the Russians themselves came to believe it. There is no reason, however, to think that the Vienna Institute had any advance information. Rather, it seems that the dolphins, being not inferior in intelligence to the men in Moscow who devised Russia's policies, were frequently able to predict the moves that Russia would make. This view is borne out by the few records of the Vienna Institute which survived the fire that destroyed the Institute in 1990.

The second Russian note caused a turmoil in Washington. Various groups urged that the Government adopt a rigid policy of demolishing two Russian cities for each city demolished in America, or that it accept the principle of "one for one," or that it do neither, but just keep the Russians guessing.

At a meeting of the National Security Council several public-relations experts expressed the view that were Russia actually to demolish one of the twelve cities she had listed, the public would demand that America retaliate by demolishing a number of Russian cities. They said that the President would thus not be able to abide by the principle of "one for one," even if he desired to do so, without seriously risking the defeat of his party at the next elections.

The Government thereupon asked Gallup to conduct a poll on an emergency basis. Residents of the thirty largest cities were asked whether if Rochester, New York, one of the twelve cities named, were demolished, America ought to retaliate by demolishing just one Russian city, or whether she ought to retaliate by demolishing a number of Russian cities. To the surprise of the Government, 85 per cent of those who had an opinion favored the demolishing of just one Russian city. In retrospect, this response does not appear to be so very surprising; the people polled knew very well that if America were to demolish two Russian cities in retaliation for Rochester, Russia would demolish one additional American city—and this additional city might be their own.

Some of the members of the National Security Council declined to take this poll at its face value and said that the people would react differently if Rochester were actually demolished. The rather involved psychological argument they cited in support of their view was never put to a test, however, for America did not intervene in Iraq.

Within a few days after the receipt of the first Russian note which listed the twelve cities, people began to register in

Washington as lobbyists for one or another of the twelve cities, and ten days later there was not a hotel room to be had in the whole city. It was the most powerful lobby that ever hit Washington. After an initial period of uncertainty, this lobby succeeded, with steadily increasing editorial support across the nation, in forcing a re-examination of the whole Middle Eastern issue. Doubts were raised as to whether Western Europe was really in danger of losing its supply of Middle Eastern oil, since there was no other market for it. It was said that while the price of oil from the Middle East could be raised, it could not be raised very much, since it could be replaced by oil from the Sahara. As the result of a re-examination of the whole issue, America decided to withdraw her troops from Lebanon and Jordan.

This decision was reached in the face of strenuous opposition on the part of a small, but vocal and influential, group of opinion makers. There were prophets of doom who declared that if America yielded to Russia's threat on this occasion, then from here on Russia would be in a position to get her way on any issue; she would be in a position to change the map at will, simply by threatening to demolish a limited number of American cities, in case America should try to resist locally, by force of arms.

Fortunately these prophecies proved to be incorrect. For the time being, at least, Russia appeared to be quite satisfied with the map as it stood. True enough, a number of nations in Southeast Asia went Communist, and so did several nations in Africa. On the other hand, the Communist government of Iraq broke diplomatic relations with Russia, in protest against Russia's supplying oil at cut-rate prices to Western Europe,

thus demonstrating once more that the capitalist nations have no monopoly in feuding with each other.

Russia did derive great economic benefits from her decision to forgo war. In short order, she abolished her Air Force and her entire Navy, including her fleet of submarines; she also reduced her Army and retained only a comparatively small number of highly mobile units equipped with machine guns and light tanks. Russia continued to maintain, of course, a large number of long-range rockets mounted on trucks or on railroad cars, which were constantly moved around along her highways and railroad tracks.

As the result of the economies thus achieved, Russia was able to invest 25 per cent of her national income in capital goods serving her consumer-goods industry, and her standard of living was increasing at the rate of 8 per cent per annum. Her per capita consumption of meats and fats rapidly approached that of America; as a result, deaths from coronary attacks rose very markedly and were approaching the American figures.

Propagandawise the Russians stressed the moral issue involved and made the most of it. All over the world Communists and Russian sympathizers proclaimed that wars, which initially merely meant the killing of soldiers, but in the end came to mean the wholesale killing of civilians—men, women and children—as well as soldiers, were now a thing of the past, thanks to Russia's decision to forgo, abrogate and abolish war. They said, over and over again, that Russia was the only truly Christian nation, since she alone, among the Great Powers, was upholding the Sixth Commandment.*

** The possibility that it might be to Russia's advantage to adopt this type of strategy was discussed by Szilard in an extensive article which appeared in the February issue of the* Bulletin of the Atomic Scientists *in 1960. It is not known whether Szilard's article elicited any response other than a notice in* Newsweek*, in America, and in Krokodil, in Russia.* Newsweek *condensed this article beyond recognition and managed to convey the impression that Szilard proposed that Russia and America ought to demolish each other's cities in exchange—to no sensible purpose. Taking its information from* Newsweek*, Krokodil suggested in its issue of April 20, 1960, that* Newsweek *carry an ad for Szilard offering to exchange his Room 812 in the Medical Division of Memorial Hospital in New York for a bed in Ward 6 in the Psychiatric Division of the same hospital. Some of his American colleagues do remember that Szilard made a prediction concerning the strategy which the Russians would adopt if there were no general disarmament, but they remember only that he predicted something rather crazy, without recalling what it was that he predicted. After his death, Szilard appears to have received some recognition, however, from his Russian colleagues, who named a small crater after him—on the back side of the moon.*

Following the Iraq crisis there were two rival schools of thought in America.

One of these held that America ought to follow Russia's example: cut down on her arms expenditure by reducing the Army, the Navy and the Air Force and adopt the Russian strategy of relying on long-range rockets.

The other school argued that operating with the threat of demolishing cities would favor Russia rather than America, because the American government was more responsible to the will of the people and the people did not like to see their cities

demolished. They urged, therefore, that an all-out effort be made to develop an antimissile missile, capable of destroying incoming Russian rockets in flight, and stressed that a defense system based on such missiles would nullify the Russian strategy of demolishing cities.

The President's Science Advisory Committee took a dim view of the feasibility of an effective antimissile defense system, but in the end the views of the Department of Defense prevailed; thus, an appropriation of $20 billion per year for the development of such a defense system was included in the budget and unanimously passed by Congress.

Most of those who urged the development of the anti-missile missile also urged that America cease to rely on atomic bombs used against troops in combat and be fully prepared to fight limited wars with conventional weapons. They argued, convincingly, that a war in which atomic weapons were used against troops in combat would not be likely to remain limited and might end up in all-out atomic destruction. Since the enemy must know this also—so they further argued—it would not resort to the use of atomic bombs against troops in combat as long as America limited herself to fighting with conventional weapons.

Taking its cues from this school of thought, the American government adopted the position that it would be immoral to use atomic energy for purposes of destruction and urged that all use of atomic bombs in warfare be outlawed. The government proposed that, until such time as atomic bombs can be eliminated from the armaments of the nations under satisfactory safeguards, each nation pledge unilaterally not to

use atomic bombs either against troops in combat or for the purposes of destruction. If such pledges were given, then America would use only in retaliation the atomic bombs it retained, and only if America or one of her allies were attacked with atomic bombs.

The position of the American government was generally supported by the press. Noted columnists pointed out that even though outlawing the atomic bomb would not necessarily prevent the use of such bombs in time of war, it would preclude nations from resorting to the threat of using atomic bombs in order to attain their objectives.

The American proposal that the use of atomic bombs be outlawed represented the main theme of most of the programs of *The Voice of America*, which received an appropriation of $1 billion a year, and the American proposal for outlawing the bomb received world-wide support. But even though during the postwar period the outlawing of the bomb had been persistently urged by Russia, the Russians showed no interest in this approach. They stood fast in the face of adverse world public opinion, and no indication was forthcoming that Russia would go along with outlawing the use of atomic energy for purposes of destruction.

Pending the completion of the development of the anti-missile missile, America followed a triple policy of maintaining long-range rockets to be used in retaliation in case America were attacked by means of such rockets, a small but mobile military force equipped to use small atomic bombs against troops in combat, and also a large combat-ready military force capable of fighting local wars by means of

conventional weapons. Since maintaining such a triple system was costly, America had an arms budget of around $70 billion. This cut down the amount invested in capital goods serving the consumer goods industry to about 3 per cent of the national income, and it slowed the rise in the standard of living to about one per cent per annum. Such a stagnation in the standard of living was not a very serious detriment, however, since the standard of living was high enough as it stood; moreover, a high defense expenditure was regarded as an insurance against the possibility of a recession.

The depression which hit America in 1974 began with unemployment in the construction industry, which subsequently spread to other industries. In the hope of inducing the Federal government to finance large-scale construction, the construction industry established a lobby in Washington in the second year of the depression. But, in spite of large-scale Federal construction, there was no marked economic improvement by 1977, at the time when America was confronted with upheavals in Iran.

The Government responded to these upheavals by promptly proclaiming that if Russia should send troops into Iran, America would not fight her in Iran, but, instead, two Russian cities of about one million each would be demolished, after being given four weeks of warning. People knew, of course, that should Russia actually invade Iran, not only Russia but also America would lose two cities, but it was generally felt that, because of the large-scale unemployment prevailing in the construction industry, America would be in a position to rebuild, in short order, the cities which she might lose.

In these circumstances, the government's proclamation had strong support in Congress, and it would be uncalled for to attribute this solely to the influence of the lobby of the construction industry. Congressmen might very well have realized that, with the development of the antimissile missile still lagging, the government had no other recourse but to adopt the so-called "Russian strategy."

Russia did not send troops into Iran. Whether she refrained from doing so because she would have lost two of her cities or whether she never had any serious intention of becoming involved in the mess in Iran may be regarded today as debatable. At that time, however, the press in America stressed that the Russians had an emotional attitude toward property and abhorred the destruction of property, particularly public property. They also stressed that the loss of a city would mean more to Russia than just the loss of property, that it would disrupt the social fabric and cause dislocations which the precariously balanced Russian social system could not easily stand.

The Iranian incident was followed by a period of quiet, and many people began to believe that the strategic stalemate had reached a stage where it was virtually stable. The map appeared to be frozen, at least in the sense that such changes as came about came about through genuine internal revolutions and no nation sent its troops across the frontier of another nation in an attempt to increase the territory under its control.

Around 1980, however, there appeared a new kind of instability, which developed into a serious threat to the world by 1985. In order to understand the problems that confronted

the world in that critical year, it is necessary to consider how the world situation had changed in the interval from 1960 to 1985.

THE AMERICAN RESEARCH FOUNDATION

The years that followed the Second World War brought unprecedented changes in the Far East. What was really novel and unique about China was not so much that China had a Communist government, but that for the first time since the days of the emperors China had a government. By 1960, it was clear that the Chinese would be able to raise production greatly, but it was not as yet clear whether at the time when this would become necessary they would be able to slow the rate of their population increase. Had they failed in this, no amount of economic progress, within the limits of the obtainable, could have appreciably raised their standard of living. It is anyone's guess whether China would have succeeded in solving her population problem had it not been for the replacement of much of her rice diet by a diet of Amruss.

It seems that by 1960 most Americans realized the foolishness of opposing the seating of China in the UN and of pursuing a policy of "No Speak" toward China. Szilard's diary, recently reprinted by Simon and Schuster, contains an entry made in 1960 to the effect that he did not know personally anyone who still thought that America ought to persist in opposing the seating of China in the United Nations. In

flagrant contrast to this, virtually all of those who ran for elective office in that year went on record against the seating of China.

This is not so surprising as it might seem, if one recalls to what extent the American two-party system favors minority rule. A few per cent of the voters who feel strongly enough on an issue to be willing to throw their vote, on that single issue, from the Democratic to the Republican candidate or vice versa, may well be in a position to determine which of the two candidates shall win. This explains why, under the American political system, a minority may force its will on the nation as a whole. Thus America's long-sustained opposition to the seating of China in the UN was forced upon her by an emotional minority of the voters, representing less than 5 per cent of the votes.

America never actually changed her vote on the issue of the seating of China in the United Nations, but she was outvoted by a two-thirds majority in the General Assembly. She refused to recognize China until 1966. That the dolphins had anything to do with America's recognition of China in 1966 was not known at the time, for people did not realize that the dolphins exerted a decisive influence on this issue through the American Research Foundation.

This foundation derived its income from the Vienna Institute, and its income exceeded that of the Ford Foundation twentyfold. The trustees of the foundation, apparently hand-picked by the dolphins, served on a part-time basis, without salary. Membership on the Advisory Board of the foundation was, however, a full-time job carrying a salary of $200,000 a

year for life. When, in the course of the years, the Advisory Board was built up to full strength its membership consisted of twenty distinguished politicians, Democrats and Republicans in about equal numbers.

The first politician to join the advisory board was Peter Douglas, who became Secretary of State when the new Administration took office following the 1964 elections. Douglas, who was irrevocably opposed to the recognition of China, resigned his position as Secretary of State in June 1965 to accept a life membership on the advisory board. His successor in office was Roger Knowland,* a Californian, who was also strongly opposed to the recognizing of China. He, in turn, resigned his office in February 1966 to join the Advisory Board. His successor as Secretary of State, Milton Land, former Senator from Massachusetts, did not share the views of his predecessors, and the U.S. finally recognized China.

* *No relation of the late Senator William Knowland.*

According to the charter of the American Research Foundation, the Advisory Board wielded great power, for its recommendations were supposed to be binding on the board of trustees. However, the charter also specified that these recommendations must be passed by a unanimous vote, and it seems that no resolution ever passed the Advisory Board by unanimous vote. While this must have been rather frustrating to its members, there is no record of anyone's ever having resigned from the general advisory board.

It is quite evident—in retrospect—that membership on the Advisory Board had never been offered by the foundation to any Cabinet officer or any member of the Senate who pursued, or supported, a constructive foreign policy. It should be borne in mind, however, that only in the light of subsequent events could it become evident whether a foreign policy was constructive or not.

In the circumstances, the world might well have remained unaware of the role which the dolphins played in American politics, except for the revelations contained in Alex Gamov's *Conversations with Pi Omega Ro*, (10th edition, New York, Harper and Brothers, 1998), which covers the two years immediately preceding the establishment of the foundation.

There was a time when people thought that the discussions reported in the Conversations were transcripts of the conversations which staff members of the Vienna Institute had with Pi Omega Ro. In view of the inconsistencies discovered, this view is probably no longer tenable, and today it is regarded as more likely that Gamov reconstructed these conversations imperfectly from memory.

As the reader may recall, Gamov, a member of the staff of the Vienna Institute, had married the sister of one of his American colleagues and did not return in 1990 to Russia, but joined the Salk Institute in La Jolla, California. Upon his retirement ten years later, he began to write the Conversations.

In his book he relates that the dolphins, who grasped mathematics, chemistry, physics and biology with ease, found it difficult to comprehend America's social and political

system. The American staff members whose task it was to explain America to Pi Omega Ro were at times so exasperated by the questions asked by this dolphin that they asked Gamov, who spoke flawless English, to come to their rescue.

Thus, on one occasion, Pi Omega Ro asked whether it would be correct to assume that Americans were free to say what they think, because they did not think what they were not free to say. On another occasion, he asked whether it would be correct to say that in America honest politicians were men who were unable to fool others without first fooling themselves.

When Pi Omega Ro became interested in foundations he wanted to know everything about them, including the legal technicalities of their tax exemption. Upon being informed that a tax-exempt foundation may not spend its funds to influence legislation but may spend them on education, he asked whether this implied that in America education did not influence legislation.

Pi Omega Ro was puzzled why money which would otherwise be taxed away and go to the Treasury should be permitted to go to foundations when obviously foundations never did anything worth while except what the Government was doing anyway and, in many cases, was doing better. He regarded the bylaws of the foundations, which provided that grants for research projects be allocated by a simple majority vote of the trustees, as an ingeniously contrived device to make certain that no imaginative project was ever approved. "Let us assume, for the sake of argument," he argued, "that one third of the trustees are men endowed with imagination and two thirds of them are not so endowed. Does not the majority vote then

automatically bar any imaginative project? And even if we accept, as the basic tenet of true democracy, that one moron is as good as one genius, is it necessary to go one step farther and hold that two morons are better than one genius?"

These conversations must be regarded as authentic, in spite of the doubts which were raised by some of Gamov's colleagues who knew him at La Jolla. Their observation that Pi Omega Ro's sense of humor showed a remarkable resemblance to Gamov's own sense of humor is of no relevance, since his long association with Pi Omega Ro may well have colored Gamov's own sense of humor. The Conversations is the only authentic document that reveals that from its inception the foundation meant to influence the course of political events in America and that the dolphins knew that no politician would be able to resist the offer of a membership on the Advisory Board.

THE FAR EAST AND EUROPE, 1960 TO 1985

The American attitude toward China started to change even before the U.S. recognized China.

As the world moved closer and closer to the long-range-rocket stage of the stalemate, nations like France, Italy, Western Germany and Japan realized more and more clearly that they could not count on American protection if they got involved in a war with Russia, because America could hardly be expected to risk the loss of her own cities for the sake of