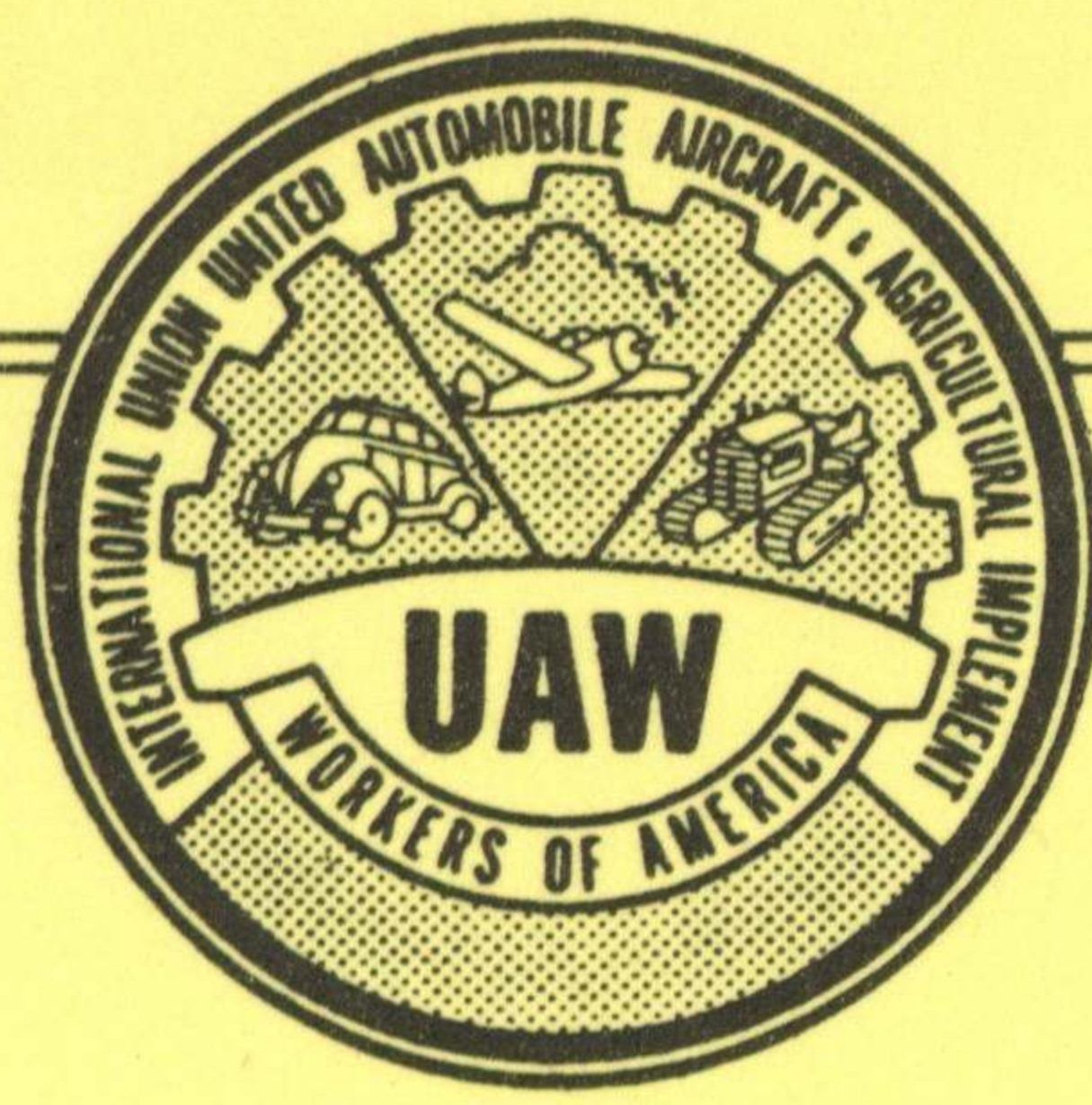


Inter-Office Communication



Dec. 14, 1962

To WPR
From Dick Kelly
Subject "Arms Control and the Challenge of Peace"

Attached:

1. speech draft
2. basic statistics
3. Adlai Stevenson address on the UN Development Decade
4. Bowles speech on principles of foreign aid
5. Test of McNamara speech setting forth the "no-cities" strategy
6. Two articles analyzing implications of the strategy
7. Two pieces on the political sources of our hesitation to sign test ban agreement, which deal as well with technical aspects of detection.

United Nations Development Decade

*Statement by Adlai E. Stevenson
U.S. Representative to the United Nations¹*

On September 25 of last year, President Kennedy raised a banner of hope for hundreds of millions of people around the world. He proposed to the General Assembly² that the sixties become a United Nations Development Decade, challenging all the nations not to compete but to cooperate in the difficult, sustained, and exciting battle against the age-old enemies of humanity—poverty, ignorance, and disease.

Resolution 1710 was unanimously approved by the General Assembly as a joint pledge and a new dedication to the noblest goal of the United Nations—a better life for people everywhere. In the truest sense we acted as united nations. Not only did we adopt the “grand design” unanimously, but in the process the suggestions and ideas of many nations were sifted and saved.

So we are united in concept; now we must unite in action. The dream must become the deed.

Before embarking on a program for this decade, it might be well to take a look at our record during the fifties. There is much there in which we can take pride. The fifties was a period when many nations in the southern half of the world conceived for the first time the possibility that they could achieve self-sustaining economic growth. This does not appear so revolutionary to us now as it would have in 1945. The fact that we accepted the goal of a better life for people everywhere as a possibility is in itself historic. We have the means to make this concept workable. By pro-

claiming the U.N. Development Decade, all of us have accepted the task of making it work.

It requires, for example, the most massive programs of education and professional training ever undertaken—in the knowledge that human talent is our most precious and least developed resource.

It requires that a proper share of the world's enormous scientific and technical genius be focused on the neglected problems of the developing nations.

It requires a much larger flow of international capital investment—in which private investors must play a major part.

It requires intensive surveys of the natural resources of all emerging countries, including some which only a few years ago were thought to be hopelessly lacking in national wealth.

It requires balanced development of industry and of agriculture.

It requires bold housing and urban development plans to meet the rapid rise in the population of cities.

It requires large and dependable export earnings by the emerging nations as a source of vital savings for their own development plans—which, in turn, means a revitalized program of international action in this field.

It requires the further growth and coordination of international institutions, both regional and worldwide, under the auspices of the United Nations.

Finally, and perhaps most crucially of all, this great world plan requires good country plans. The decision to develop or not to develop is, above all, an act of the national will. A nation's brainpower, its waterpower, the power of fuels buried in its

¹ Made at the 34th session of the Economic and Social Council at Geneva, Switzerland, on July 9 (U.S./U.N. press release 4022).

² BULLETIN of Oct. 16, 1961, p. 619.

August 6, 1962

SOURCE: THE DEPARTMENT OF STATE BULLETIN

soil—all these will stay buried without willpower.

The developing nations of today have set out to achieve in a decade, or at most a generation, what other nations have only done in a century or more. In this process they themselves must supply 90 percent of the capital and still more of the human talent. They must supply the self-discipline to save and invest and the courage to reform ancient practices in such fields as land tenure, tax collection, and government administration. These are the hardest tasks in the Development Decade, and they fall on the government and peoples of the developing nations themselves.

The Lessons of the Fifties

Certain notable steps were taken during the fifties to help countries make a reality of their desire for a better life. There was a steadily increasing flow of development capital to the modernizing countries. Technical cooperation expanded in remarkable fashion. It became evident that brainpower and know-how are the most important ingredients in development. There was also an increasing appreciation of the value of multilateral institutions of international economic cooperation, particularly those within the United Nations system. The establishment of the Expanded Program of Technical Assistance, the U.N. Special Fund, the International Finance Corporation, and the International Development Association testifies to this. The United States has supported this move with whole heart. We will go as far in support of these multilateral efforts as the matching efforts of other countries will permit us to go.

But the record of the 1950's is not entirely a matter for congratulation. Many countries made no appreciable progress toward self-sustaining growth. Serious mistakes were made; countries at all stages of development make their share of these mistakes. Indeed it would have been miraculous if such mistakes had not been made. We were plowing virgin soil and mapping uncharted seas. After all, the thought of helping all people toward a better life is less than 20 years old, while people have been fighting each other for more than 20 centuries. Honest confession of error does not license more of the same. Surely man, who has unleashed the secret of nuclear power and is now exploring the frontiers of outer space, can do a better job of

solving the problems of this planet. During this decade we must alter the attitudes and traditions of centuries. We must dare to pool the resources and skills of mankind for the common good.

The most important lesson we have learned is that the key to development is the developing country itself. It is up to each government to mobilize its own people and resources and to undertake essential self-help measures for social and economic reform. Without such action by the country itself, no amount of outside help can promote viable economic growth.

The leader of a newborn nation of Africa, the Mwami Mwambutsa IV of Burundi, spoke truly to his countrymen recently when he said: "We must work harder. We must redouble our efforts. No one helps a parasite."

Yet no nation need face its tasks alone. That is the momentous meaning of the United Nations Decade of Development. International machinery can place at the disposal of every country experienced advice to help it in working out a sound, hardheaded country plan. Both foreign capital and foreign skills can be imported to supply critical needs. International commodity agreements can assure a dependable supply of foreign exchange. World institutions can train local talent and survey local resources.

Thus, seen in its totality, the plan of construction we build for the Decade of Development can be the most inspired common project that the world community of nations has ever undertaken.

We have also learned that the injection of outside capital into a country is by no means as important as had been generally thought. The common factor of development in countries which have achieved self-sustaining growth has been neither political nor ideological, nor the possession of a wealth of resources or an abundance of capital. It has been the emphasis on the development of human beings, on training, education, and the building of institutions to develop people's capacities. People are the one common denominator of progress. No improvement is possible with unimproved people. Advance is inevitable when people are liberated and educated.

Let us not depreciate the importance of roads, railroads, powerplants, factories, and the other tools of economic development, but these tools will be of little help to real development unless the people who use them are developed. The causes of

poverty vary greatly from one country to another, and so must the solutions. An oppressive social structure which channels returns from the many to the few can hobble any real development. Corruption or inefficiency in the public administration can serve to frustrate the efforts of well-intended, intelligent, and hard-working people.

It is not for us to devise patent medicines to be dispensed to the modernizing countries. It is rather for them to examine their own situations, to develop their own country plans, to mobilize their own people in correcting defects in their social and economic structure. A call upon us for marginal but critical help for such a program will find my Government ready to respond sympathetically and effectively.

Without trying to work out any general dicta, we must nevertheless agree on certain courses of action in which we can join. In this respect the Secretary-General has done us all a great service by suggesting in Document E/3613 a number of important measures for action during this decade. Action proposals by the United States Government are outlined in an addendum to that document; consequently, I shall not enlarge on them now. There will, of course, be a more detailed examination of these and other action proposals when the Council decides on its joint action in the form of a resolution.

The Human Factor

In a grand strategy for development the key factor is the human one. The modernizing nations are in a hurry. They do not want to repeat—nor should they—the slow process of centuries which took place in the industrialized countries of the world.

Because of the importance of the Expanded Program of Technical Assistance and the Special Fund in helping countries to develop their people and their institutions, the United States is convinced that we must reach, without delay, the target of \$150 million for these two programs. I must say frankly that we are greatly disappointed in the slow growth of contributions to date; the total has barely reached \$100 million. My country has pledged \$60 million for 1962, provided only that our contribution may not exceed 40 percent of the total. The next pledging conference for these programs comes in October. It will be a moment of truth for all those nations which

have promised to support the Development Decade.

We are beginning to make quite new headway in the vital field of education. But let us not have any doubt about the scale of the need. For instance, Nigeria alone may need over the next decade to import 7,000 years of teaching power from abroad. The need in other African territories is no less, and we have had spelled out for us at a series of admirable UNESCO [United Nations Educational, Scientific and Cultural Organization] conferences on education in Africa the full scale of the challenge we face.

If the capital needed is vast, the demand for teachers for training is greater still. Yet what could be more moving, nay, inspiring, than the fact that Africa, the youngest of continents politically, should be encouraging us all again with a realization of youth's ardor to know and understand. This passion for education can only be met by a concerted international effort, and we have yet, as a community of nations, to establish the machinery or work out the procedures for dealing with this vast challenge.

We in the United States are perhaps working away at one fringe of it with the provision of young volunteer teachers in our Peace Corps. We have begun to wonder, Mr. President, whether we should not tap the large number of senior citizens of unusual knowledge, skill, and experience who would welcome the opportunity to be of service to their fellow men abroad. Due to modern standards of health, medicine, and nutrition, there are thousands of people who reach the customary retirement age in our country and still have many years of service which they would be glad to devote to a cause as noble as the Development Decade if organized and systematic efforts are made to use them. Perhaps provision could also be made for obtaining some top-level people a few years before they would normally retire. Steps of this nature, taken in many developed countries, could tap a rich mine of skill and experience for the benefit of the less developed countries, especially in the fields of industrial management and advanced technology.

If education is the basis of all the rest, as I believe it is, we must not understand it in any narrow sense. It is education if we take graduate students and give them a basic training in public administration. It is at the same time a profound task

of development, for without a functioning administrative structure there will be no economic expansion.

It is education of a vital sort if we help train experts in farm training and farm extension work. Without this essential task of training, no amount of investment will do the job. The fertilizer will lie in sacks to rot. The better seed will be mixed with the old. Mattock and hoe will continue the old appalling grind of work, and the young people will escape to the cities. There will be no development without a breakthrough in agriculture—and this means men even more than it means machines; it means instruction fully as much as money; it means intelligent work as well as hard effort.

And this is no less true for industry. If capital is invested in developing economies without a whole new emphasis on training at every level, then either the enterprise will have to stay in foreign hands, which is politically unacceptable, or the capital will be wasted, which is quite as unacceptable in the rather longer run.

Much, much more can be done, I am convinced, to upgrade and train the officers and workers already involved in developing industrial systems. On-the-job training, the purposive preparation of men, the closest liaison between business—public and private, foreign and domestic—and educational authorities is a vital part of the “big push” in education that we have to make in the next decade.

In fact, the most vital thing foreign enterprise has to offer at this stage is not so much its capital—vital as it is—but the habits and insights of trained industrial work. Without it, as [Secretary-General] U Thant has reminded us, nothing is easier than to build the wrong factory in the wrong place for the wrong product in the wrong market. Then such factories, all working at a loss, do not contribute anything to development, however bravely their chimneys may smoke. On the contrary, they represent “disinvestment” and, if I may coin the word, “dedevelopment” as well.

Training in men, investment in men—these must be fully as much our aim in the next decade as investment in materials and machines. And I confess that I am uncertain whether we are as well prepared for this need as for the simpler task of transforming resources. Among the contributing countries, methods of recruitment seem chancy.

We have no new service careers to meet the new needs. The old technical services are disintegrating. Service overseas is not always the good mark for further promotion that it should be. We may well be very short, on a worldwide scale, of key kinds of expertise. And men able to train others at the foreman level are probably the scarcest of all.

These, I fear, even more than capital, may be the bottlenecks of our new effort. And, again, how can we hope to break them effectively without a genuine *international* effort in which the various agencies of the United Nations clearly have a vital part to play—in overseeing recruitment, in training the enlarged cadres, in matching demand and supply, in seeing that all nations, developed and developing alike, play the part they can in filling in other peoples' imperative needs.

In this whole issue of development, in short, our perspectives are constantly widening. The earlier idea of a quick transfer of resources has now been extended to cover a much wider and more subtle transfer: the transfer of skills and ideas and techniques, a transfer which implies much more cooperation and joint action and, I would suggest, a far more creative interplay of ideas between giver and receiver.

To give only one example, are we not all in the process of discovering how much better our scientific and technical training should be, yet how urgent it is that in this training the humane interests of man—morals, history, the sense of beauty, the passion for truth—should not be lost? It is experimental work for us all. May we not find that in trying to help each other we find out more about and for ourselves as well?

I believe it, and this is one more reason why the effort is best conducted at an international level, so that the greatest richness of experience can be drawn upon and the widest exchange of knowledge achieved.

Trade Expansion

There is another broadening of our horizons which is central to the problem of development. It is the realization that aid—whether in materials or in men—is only half the question. The other half—perhaps the even more vital half—is trade. We have to face the wry fact that for many of the developing nations the golden years of development had little to do with aid. They followed on

the raw-materials boom which was created when the Korean war occurred before the hangover of demand from the Second World War had spent itself.

Throughout Latin America and Africa, the years from 1951 to 1955 were those during which reserves were built up and new high rates of investment achieved. In India, too, the history was the same. But virtually without exception since then, primary prices have slipped steadily downward. No sustained development is possible against this background of feast and famine.

So we are determined to cooperate with other governments of good will in a search for a solution to problems of commodity trade. These are not idle words. At this very moment my Government is sitting down in New York with a conference of producers and consumers of coffee³ to work out a global agreement on this highly important commodity. Coffee is second only to petroleum in its importance in world trade.

Fifteen of our Latin American neighbors have a great interest in coffee, and a number of African and Asian countries also have a substantial interest. An agreement could be of considerable help to the producing countries, particularly if it is coupled with action in European countries to increase coffee consumption. We refer in particular to measures which would reduce internal taxes in Western Europe and narrow the enormous spread between import price and retail price in Eastern Europe. Coffee is known to be a stimulant to individuals. It can also become a most important stimulant to the growth of many developing countries.

We are also engaged in consultations or negotiations on a number of other important commodities, such as cocoa, tin, and rubber. In our approach to all of these problems we have attempted to proceed on a pragmatic case-by-case basis. We are also devoting most sympathetic consideration to possible ways of using compensatory financing as a stabilization technique. We have been impressed by the report of the Inter-American Group of Experts suggesting such a compensatory financial mechanism. We believe that a general, basically automatic, compensatory financing scheme of this type may be both desirable and feasible.

In mentioning the above examples I do not wish

³ See p. 234.

to slight the extremely important contributions of GATT [General Agreement on Tariffs and Trade], the FAO [Food and Agriculture Organization], and the United Nations Commission on International Commodity Trade in dealing with commodity problems. We are fully cognizant of the value and scope of their work. Indeed, we believe that their increased activity and the heightened interest in their work warrants a new look at the entire international machinery concerned with trade problems. This new examination would not be undertaken with the thought that any new organizational machinery or even substantial changes in existing machinery would be required. It would rather start without prejudice and be aimed at finding out who is doing what in the trade field.

In this way we would have a better idea of what is being done, what capabilities there might be, and where we should direct our future efforts. If a group of experts were to be designated by the Secretary-General, we might have for our next session of the Council a most useful basis for study and effective action. Our delegation will present a concrete proposal along these lines when we come to the appropriate item in our agenda.

Capital Flow

I hardly need to spell out the issue of capital and saving. Briefly put, it is that growth can hardly be sustained in economies at the early stage of development unless savings rise at a rate which allows for increased population, some growth in consumption, and a margin for saving as well.

Since, however, a large number of the emergent lands have such low per capita incomes, an adequate rate of savings is too onerous. Hence, the fundamental argument for increasing the level of annual assistance from all sources is that, with such a flow of external capital assured, emergent governments would not need to impose a pattern of savings on their peoples which it would be almost impossible for them to accept *voluntarily*.

This is a political argument, and, of course, one can argue endlessly about the scale of saving which leads to intolerable internal pressure and hence to the scale of external aid that may be needed to offset that pressure. I don't think there are any general answers to this question. It has to be answered country by country, plan by plan. Indeed, I think it is one of the generalizations that has to

be treated with considerable care, for although it is true that some nations cannot yet afford much domestic saving, it would be no service to them—or to any state—to suggest that the *whole* task of saving can, as it were, be exported to other wealthier states.

This fact has nothing to do with whether or not they—the wealthier communities—can afford more aid. It is simply that no country can grow without learning to save and invest, without building the institutions which encourage saving, without thinking about taxation on the one hand and incentives on the other. Development is strictly a learning-by-doing job, and any expectation of importing the whole revolution from abroad is doomed to expensive and acrimonious failure. Only by keeping the work of development fully international—by matching the contribution from outside by a full-scale, dedicated effort from within—are we likely to make progress in the decade before us.

In this connection we found the latest ECAFE [Economic Commission for Asia and the Far East] economic survey⁴ of unusual interest, in particular the chapter on the financing of economic growth. The problems of domestic saving, foreign saving, and the financing of investment, related as they are in this chapter to the total problems and goals of various countries, present a discussion in an area which is too frequently misunderstood or often too much ignored. Domestic savings, the report demonstrates conclusively, are not necessarily related to per capita income as much as they are to governmental and population attitudes. One thing seems to be increasingly clear: Irrespective of the capacity of a country to command foreign infusions of capital, whether or not it can go forward depends basically on the willingness of that government and its people to exert all appropriate energy in the direction of achieving a proper level of domestic savings.

However, having said so much, I would also stress the fact that beyond a certain point domestic savings do *not* do the job. At a time of rapid growth many goods will be needed by a developing country which simply cannot be secured at home. If they could be, the economy would already be developed. Machines, components, factories, tools, scarce materials—all these can only be pro-

cured from overseas and only with other people's currencies.

So great is the need for the new types of import that most developing countries would need to double and triple their exports by 1972 if they were going to be able to cover the import bill development demands. A very large increase in private capital investment will be necessary, as the Secretary-General has pointed out. But the gap must also be filled by grants or public loans on favorable terms—once again, a need that can only be met by collective international action and one which lies at the very core of our plans for more rapid growth.

One of the most important developments of the past year has been the substantial increase in multilateral financing. During the fiscal year just ended the International Bank and its affiliate, the International Development Association, extended loans and credits amounting to \$1 billion. This is one-third greater than the previous historical high. Almost all of this capital has gone to the modernizing countries.

Of equal significance is the type of credit provided by the International Development Association, which extended its first credit in May 1961. These credits have a 50-year maturity period and bear no interest. Amortization does not begin until a 10-year period of grace has elapsed. IDA is filling a great void by the character and terms of credit that it is extending. Its policy provides a type of credit that supplements what an applicant might otherwise have available on the basis of normal commercial credits. In fact, it has thus filled the void which was of so much concern to the advocates of SUNFED and the U.N. Capital Development Fund. IDA's command of resources, even in its earlier stages, has exceeded the hopes of many.

The creation and growth of the IDA is surely one of the most important single events of recent decades in the field of capital assistance to developing countries. Accordingly, we believe the time has come to explore the conditions under which additional financial resources may be provided to it.

In spite of the encouraging increase in public capital, the gap between capital availabilities and the needs of the developing countries is far greater than the financing available from public sources.

⁴ U.N. publication, sales document No. 62.II.F.1.

In most of the industrialized countries of the world the fountain from which we must draw a large portion of the resources and skills is in the private sector. These private resources and skills are not merely additional to those of the public sector. In many areas they are different in kind and may be obtainable only in the private sector. Private enterprise is certainly in the best position to nurture and transplant the entrepreneurial spirit, to conceive, organize, and set into operation new ventures that will prosper and grow, and I can think of no more important ingredient for development.

An increasing number of modernizing countries have come to recognize the contribution foreign private investment can make to economic development. Indeed, many of them have indicated in their development plans and their investment laws the role foreseen for capital.

And capital will only go to work in a community ready to absorb it. We tend to think of aid in terms of capital, because the first experiments in aid giving were made in European nations which possessed a full apparatus of economic and social institutions. Without these preconditions, development must be slow; and where they do not exist, it is our first task, as I have said, to help create them.

For these reasons, Mr. President, we believe that both the private sector and government have indispensable roles to enact in certain activities basic to development. Finding the proper apportionment between them and creating a successful interaction is probably the key to achievement. In my country the relative parts have changed from time to time as the challenges have changed. We recognize that in certain modernizing countries the public sector may for a time be more important than it is in the more developed countries. But no country should lose sight of the need for harnessing both government efforts and the dynamism of free enterprise.

The Atlantic Community

The tides of history, in this particular time, have brought the world to a fortunate conjunction of circumstances. The colonial system throughout the tropical regions of the world is coming rapidly to an end. Almost the first object for which the emerging nations wish to use their new independ-

ence is to overcome the age-old curse of poverty and ignorance, which are the most elementary obstacles to personal freedom.

In this same period the northern Atlantic region is emerging into a postcolonial era of unprecedented growth and prosperity. This growth, starting from the most advanced industrial and technical base known to history and spurred on by increasing regional unity, provides the very resources of capital and technical and scientific accomplishment on which the new and emerging nations must draw.

I speak as the representative of a nation whose stake in the success of the Atlantic community is very great. This is one of the historic creative developments of the postwar generation. We are determined that the Atlantic community, far from being opposed to the general interest, shall move in directions that will serve and invigorate the economic and political freedom of the whole world and especially the interest of the developing nations.

International trade today has hanging over it the vast question mark of Britain's entry into the Common Market. Whatever the outcome of the negotiations, it is clear that a new economic giant exists in Western Europe. It is essential that this giant should be a liberal, low-tariff, cooperative giant, ready to engage in joint policies to end the unbalance in world trade and to see to it that positive policies are adopted to give the developing world fuller advantages and wider access to Europe's fabulous demand.

We have also urged in the Organization for Economic Cooperation and Development that all of its developed members endeavor to attain a rate of capital flow and assistance amounting to about 1 percent of their national income. This is in line with two resolutions adopted by the United Nations General Assembly on the initiative of India. I might note in this connection that the total of capital flow and economic aid from the United States is already about 1 percent of our national income.

I will tell you frankly that in my country some critics insist there is an essential conflict between Atlantic regionalism and the policies pursued by the United Nations. They ask: How can we of the United States work with both? And if we should be forced to choose, how can we choose any-

thing but our friendly alliance with the West?

When my compatriots raise this question, I say to them that I do not believe this is a real antithesis. I do not believe we have to choose. In fact, both these relationships are essential to each other and to the peace of the world.

The United States, therefore, proposes both to support a growing Atlantic community and to use it as a creative force for unity in the world at large. We shall experiment freely within it on the institutions and policies of free association; and thus we may perhaps provide models for other continents and even for the association of continents which ultimately has to come. We shall make use of all the worldwide agencies—the U.N. programs of technical cooperation, the World Bank, the International Development Association, UNESCO, FAO, and other important members of the United Nations family. Atlantic aid, channeled in part through them, will strengthen both the Atlantic community and international society together.

In fact, the Atlantic community will be in a position to seize, more actively than ever, opportunities to join in wider initiatives: in cultural interchange, in the science and technology of outer space, and in the Development Decade itself.

In short, we shall seek, in season and out of season, to demonstrate that the fortunate and advanced nations of the world are forming our association, not to withdraw from our common human responsibilities but to explore them more deeply and more effectively, not to look inward on our own affluence but outward on our common human tasks. That is our pledge for the United Nations Development Decade.

Need for Annual Review

Mr. President, at this session of the Council we are pledged to adopt a concrete plan of action for the Development Decade. But we must not feel that our job will be done; it will only be begun. We must continue to act in implementation of the goals we set here. Also we must reexamine our programs each year and search for all possible improvements.

To this end I am recommending to the President of the United States that he establish a United States Committee on the United Nations Development Decade. This Committee would include outstanding American authorities on all aspects of

development—economic, social, technical, and, above all, human. It would provide the President with the best possible thinking on how to make the most of the United States participation in the U.N. Development Decade. We hope that our contribution, as a modest part of the whole, will lead to a constantly growing and improving effort as we review our progress from year to year.

We are faced with an unprecedented challenge. It is true that poverty, ignorance, and disease have plagued mankind since the beginning of recorded history and probably beyond that. We face the challenge now because, for the first time, we have the means for doing away with these ancient scourges of humanity.

A great American from my State of Illinois spoke of a similar challenge in these words: “. . . the dogmas of the quiet past are inadequate to the stormy present. . . . As our case is new, so we must think anew and act anew.” That was President Lincoln in his second annual message. Our challenge is different, but it is no less a call to think anew and to act anew in this first concerted, cooperative, and sustained United Nations effort to better the lot of men everywhere. Old concepts need not be discarded just because they are old, as witness the enduring precepts of Confucius, Moses, Buddha, Christ, and Mohammed; nor must we retain what is, merely out of habit. The job we face is nothing less than the development and execution of a grand strategy for world growth. We must therefore be daring in thought and actions; the stubborn problems we face will not yield to indifference, indecision, timidity, or inertia.

Finally, let me point to what many have noted about this question. All round the world, men are in open or potential revolt against the degree to which modern technology seems to make them tools and instruments, not responsible human beings. I believe this fundamental and justified desire to achieve the autonomy and dignity of responsible work explains much of the profound social unrest which we must recognize as a potent fact in the developing world. It underlies the appeal of socialism, the attack on feudalism, the dislike of plantation industry, the distrust of wholly owned foreign corporations, and even distaste for the necessary disciplines of the industrial enterprise.

Is not this a whole area of basic human relationships which we should study together to see

whether technology cannot be combined with less authoritarian structures? We have an immense amount of work to do in studying how the men and women engaged in development can see that their work, their effort, their dedication is the key to all the rest. The truth is that lazy, irresponsible, or indifferent people cannot achieve modernization. Yet how often the human factor is left out.

No society, no system, has all the answers, however much it may be tempted to claim that it has. We must all share our experiences and see if we can do better. And where can we do so more constructively than within the framework of the United Nations family, to which we have already given our assent and support?

Development and modernization are processes which involve the whole human race and which cannot be solved unless the human family is prepared to work together and think together as a human family should. I do not need to underline the hideous dangers to all of us of failing to do so; and I would say that the most profound significance of this Decade of Development should be a determination rising above national or racial or ideological conflicts to discover those tasks which, accomplished together, will give us a living sense of our common humanity.

It is not only in outer space and in moon probes that we ought to seek joint research and activity. Here, in remaking the conditions of existence on the face of our ancient, precious, and lifegiving planet, we ought to try with more and more urgency to find the cooperative ways of advance, the joint work which can bring progress, the mutual support which underlines our common humanity.

There is so much to be done, so many patterns of collaboration to be elaborated, so much good will waiting for demonstration, so much young enthusiasm to be unleashed. Is not this task of development worth infinitely more than the horrific sums we waste on armaments or the fanatic dedication we give to partisan divisions which may end by destroying us all?

We are poised these days between annihilation and the possibility of plenty and a decent life for all. In this decade a decisive choice may be made. I pray that, by embarking with courage and decision on the way of development, we show that we can choose life, not death; hope, not despair; brotherhood, not suicide. Our choices today

mean no less than this in terms of the final destiny of man.

Mr. A. A. Solaru, a Nigerian who participated in the African summer study seminar held at MIT last summer, summarized the message of the conference as follows: "Do not dream dreams. Go do something about them. If it is not going to be a question of asking a man to lift himself up by his shoes or ears—and I am going to do something about it—I must have not only the will but the material and guidance to help me do these things."

I want to say to those of the less developed countries that show the will to do something about their dreams: You will find the United States ready to cooperate in providing that critical margin of material and guidance that you may request and need. We shall be glad to join with others in providing some of these essentials through the U.N. system. If we all work at it, this session of the Council will be remembered as the meeting where the decisive campaign against mankind's ancient enemies was begun.

18-Nation Disarmament Conference Resumes at Geneva

The Conference of the 18-Nation Committee on Disarmament was resumed at Geneva on July 16. Following is a statement made by President Kennedy on July 14 regarding the resumption of the negotiations, together with a Department statement of July 16 concerning the U.S. position on the issue of inspection and control.

STATEMENT BY PRESIDENT KENNEDY, JULY 14

White House press release (Hyannis, Mass.) dated July 14

The 18-Nation Disarmament Committee resumes its deliberations on Monday in Geneva after a month-long recess.¹

The United States continues to regard this conference as one of signal importance for the future of humanity. If a beginning can be made by braking the arms race and moving toward general disarmament, mankind will have turned a corner

¹For a summary of developments at the conference Mar. 14-June 15, 1962, see BULLETIN of July 23, 1962, p. 154.

Basic Principles of Foreign Aid

by Chester Bowles¹

Our theme today is the Alliance for Progress. Through this partnership we are engaged in the greatest common effort that the American people, north and south, have ever undertaken. Our goal is the creation of a truly "New World," in which the aim of freedom, progress, and justice which has inspired the peoples of the Americas for nearly five centuries will move steadily toward realization.

Yet in a very real sense this vast enterprise is only part of a worldwide alliance for progress which may be spelled in many languages—an alliance which we hope may increasingly tie the United States and its people to the nations and people not only of Latin America but of Asia and Africa as well.

Our United States foreign aid program is an integral part of a global effort involving many of the industrialized free nations, which now contribute capital goods and technicians to speed the development of the less privileged two-thirds of mankind. By and large this unprecedented effort has been extraordinarily successful. In Pakistan, India, Israel, Formosa, Nigeria, and many other developing nations, schools, clinics, and roads are being built, malaria eliminated, and agricultural improvements spread through rural extension services as part of a vast new effort at nation building.

In India, for example, with a population larger than that of Africa and Latin America combined, foreign assistance coupled with able planning and

hard work by the Indian people has set new records in democratic growth. A comparison of India's accomplishments in agriculture, industry, and the organization of natural and human resources with the sorry record of Communist China illustrates the effectiveness of democratic techniques and the dedication of free people.

Yet despite these and many other examples of progress, our foreign aid program is still regarded with skepticism and even hostility by many Americans. What is particularly disturbing are the criticisms of many sober observers who agree that faster economic and social progress in the developing nations is essential but who question the effectiveness of some aspects of the program itself.

Why is it that our foreign aid program, despite its acceptance as a vital element of American foreign policy by almost every responsible leader in each political party, remains a subject of intense congressional debate and critical public comment?

One reason has been a general failure to recognize the clarity and sophistication with which Congress has laid down the guidelines for the program. Another reason, in my opinion, is that many of us have only begun to recognize that the process of nation building is inevitably long and tedious and that dramatic results cannot be achieved quickly. This has often led to frustration and disillusionment with the whole developmental process. Moreover, in the 1950's we were dazzled by the success of the Marshall Plan in helping to rebuild Western Europe and unprepared to deal as realistically as we should have been with the quite different challenge of economic development in the underdeveloped continents.

Ten years of experience have now taught us

¹ Address made before the National Conference on International Economic and Social Development at Chicago, Ill., on July 19 (press release 467 dated July 18). Mr. Bowles is the President's Special Representative and Adviser on African, Asian, and Latin American Affairs.

August 6, 1962

SOURCE: THE DEPARTMENT OF STATE BULLETIN

that economic development is necessarily linked to social development, that both are incredibly complex, and that indigenous built-in factors over which we have no control may profoundly affect the final result.

Complexity of Problems in Developing Countries

As we consider developments in Asia, Africa, and Latin America our minds boggle at the staggering variety of problems with which our aid programs must cope.

Africa for instance is overwhelmingly rich in resources but lacking in trained men and women to lead the forward surge. Here education and training on a mass basis must have top priority to provide the African nations with a new capacity to develop their capital and human resources.

In most new Asian countries, on the other hand, the central obstacle to rapid growth is the pressure of population against a limited resource base. Here the requirements are not only for more trained people but for substantial capital to create the basis for an industrial and agricultural breakthrough.

Latin America presents a quite different challenge. Here are nations with vast, untapped natural resources which have been free from colonial rule for more than a century. Yet because the essential economic and social revolution has not yet taken place in most countries, great wealth often exists side by side with the most abject poverty. One and one-half percent of the people of Latin America, those with 15,000 or more acres each, are said to own half of all agricultural land. Only a handful of countries have an effective, progressive income tax.

However, when we look beyond these basic political and economic differences among the three developing continents, we see that their problems are remarkably similar in several important ways.

For instance, the vast majority of the people in all underdeveloped countries live in rural areas. Whether they live in Africa, Asia, or Latin America, this means that the framework of their lives is largely shaped by weather, soil, land ownership, disease, and illiteracy.

Most rural peoples are in a constant struggle against the exploitation of landlords and moneylenders.

As the sons of peasant families crowd into the great cities in search of jobs that will pay them

their first cash wage, slum housing becomes steadily more crowded.

Young, idealistic university students, frustrated at the injustice which they see on all sides, parade and protest for change—any change—from the sterile and hated *status quo*.

With relatively few exceptions harried governments lack the financial experience, civil service organization, and the political strength quickly to break the chains of backwardness and prejudice that bind their people.

This political, economic, and social pattern is well established on all three developing continents. It will not be easy to change. Yet if we are to build a rational world in which all men can enjoy a greater measure of opportunity and dignity, change it we must.

Improving Effectiveness of U.S. Aid Programs

How can this be accomplished? In particular how can our economic assistance programs contribute with increasing effectiveness to the *process* of change—in Asia and Africa as well as in Latin America?

During the past 18 months the structure of the Agency for International Development has been thoroughly overhauled. New and vigorous individuals have assumed positions of responsibility. I believe that our machinery is now tooled up and ready to go. The pertinent question, therefore, is: Where is it going?

In my opinion the next forward step is the establishment of a series of basic operating principles which will enable the recipients of our aid, the Congress, and the American people clearly to understand what we are striving to accomplish and how we intend to accomplish it. I believe that our experience over the last 10 years provides us with the essential understanding to establish such guidelines. Moreover, this effort has been made easier for us by the fact that the *basis* for a coherent, consistent, effective development program was laid down by Congress in the Act for International Development of 1961.

Our task is to draw directly from this basic source of authority, to develop criteria that meet the congressional intent, and, except in the face of overriding political consideration, to apply these criteria with courage and consistency in allocating loans, grants, and technical help.

This will not be a simple matter. The political

pressures that surround the decision-making process are powerful and persistent. Most relationships throughout the world are in a state of flux. Irritations and frustrations with other governments and individual leaders may produce sudden and unpredictable swings of congressional and public opinion.

In view of these conditions it would be wishful thinking to assume that we can lay down some neat, inviolable rules for the operation of all of our aid programs, turn them over to the IBM machines, and await the results. The most carefully designed guidelines rooted in the most thoughtful congressional language will not allow for all contingencies. There will be many situations where we will have no alternative but to throw away the book and exercise our judgment.

Yet if the guidelines to which I refer can be made to shape no more than 80 percent of our administrative decisions, the economic development programs will have been made much more acceptable to Congress, more understandable to the American people, and vastly more effective in their contribution to a more rational world.

Against this background let us consider five key guidelines, each based on the legislation passed by Congress, which I personally believe would help to bring new consistency and effectiveness to our efforts.

Objective of Development Assistance

1. *The objective of the program is the development of independent nations, each capable of exercising the maximum freedom of choice within the framework of its own culture.* I say "objective" rather than "objectives" because one factor which has often weakened our efforts in recent years has been our temptation to make the program serve several different and often competitive objectives.

Whatever the byproducts which may flow from a successful aid program, at heart there is only one fundamental objective, which Congress has made abundantly clear. In last year's Act for International Development the purpose of foreign aid was spelled out in the following terms: to help the peoples of less developed countries "to develop their resources and improve their living standards, to realize their aspirations for justice, education, dignity, and respect as individual human beings, and to establish responsible governments."

Congress stressed that this effort would serve to strengthen the forces of freedom and peace on which the survival of free institutions depends. Congress did not say or imply that economic assistance is expected to buy friends or allies. There is no suggestion that those who sometimes disagree with us in the United Nations are unworthy of our help.

In giving *development* assistance—as distinguished from *military* assistance—the congressional directive is simple and clear: to assist in the creation of vigorous independent nations, working to develop their own cultures, as an essential step toward an enlarged community of free and self-reliant nations.

I might add that wherever, in America or abroad, I have spoken of the objective of our economic assistance program in these simple, uncomplicated, human terms I have found understanding and agreement.

A Program for All the People

2. *Economic growth by itself will not achieve our objective of free, independent societies.*

Once again Congress has made its intentions clear in the law: economic aid should be concentrated on those countries which are "showing a responsiveness to the vital economic, political, and social concerns" of their peoples.

This congressional directive reflects the knowledge that additional output by itself will not result in a stable, peaceful, happy society. There is nothing soothing or inherently stabilizing, for instance, about a new steel mill; in an agricultural community it may be a politically and socially disruptive force.

Although industrial expansion is essential, it is only part of the answer to the challenge of the developing nations. This is dramatically apparent in Latin America. The per capita income among the Latin American countries varies widely. Some have an average per capita income that exceeds those of several European countries. Others are among the poorest in the world. The per capita gross national product of Venezuela, for example, is larger than that of Austria; that of Bolivia is less than that of India.

Yet in Latin America as a whole there is no correlation between economic growth and political stability. The richest countries may be as politically explosive as the poorest.

If increased economic capacity does not in itself assure a forward-looking, stable society, what added ingredients are required?

A study of the characteristics of developing nations throughout the world suggests the answer: Responsible, effective governments are most likely to appear in those nations with a sense of individual justice and participation in the great task of nation building.

When this conference was organized a decade ago, the name it chose—the National Conference on International Economic and Social Development—reflected an understanding of an essential fact which at that time was only dimly realized by most Americans: that true development must be both *economic and social*.

And, I would add, *political*, as well. Not political in terms of international diplomatic maneuvering or in the context of the cold-war struggle, but political in terms of domestic institutions which create an informed and constructively motivated citizenry.

In one word Congress has stressed and experience has proven that the proper concern of our aid program should be with *people*—not just a privileged few people, favored by outmoded economic and social systems, but with *all* of the people.

In many countries during the earlier years of the aid program our principal focus outside of the technical assistance program was the minority who live in the cities, where problems were apparent and more easily prescribed for. Yet now we recognize that it is the 75 percent of the people who live in the villages that will largely shape the political and economic future of Latin America, Asia, and Africa.

Congress recognized this central but often neglected fact when it laid down the following directive in the AID legislation:

Whenever the President determines that the economy of any country is in major part an agrarian economy, emphasis shall be placed on programs which reach the people in such country who are engaged in agrarian pursuits or who live in the villages or rural areas. . . .

Fortunately it is in the rural areas of the world that the forces of freedom have the greatest advantage.

Which nations—the free or the Communist—now have the agricultural abundance, and which have the shortages? In what kind of societies

is the farmer most likely to own his own land and to live his own life? Which, in short, has the most to offer to the man with the hoe? Here is a contest which we Americans can approach with confidence.

Criteria for Aid Programing

3. *The congressional language in the AID legislation provides a clear basis for more specific criteria to direct our AID administrators in the programing of loans, grants, and technical assistance.* Without such criteria we can become a prey to every kind of pressure and persuasion and ultimately bogged down in an endless series of unrelated decisions.

Let us again turn to Congress for direction. The AID legislation clearly recognized this need for standards and priorities:

“Assistance,” the law reads, “shall be based upon sound plans and programs; be directed toward the social as well as economic aspects of economic development; be responsive to the efforts of the recipient countries to mobilize their own resources and help themselves; be cognizant of the external and internal pressures which hamper their growth; and should emphasize long-range development assistance as the primary instrument of such growth.”

Although the intent of this language seems evident, it is not an easy matter to transform it into the specific criteria necessary to guide our aid administrators.

It is not easy for two reasons: First, every underdeveloped country is different from every other, and second, the application of criteria drawn directly from the legislation is bound to antagonize the leaders of many countries which fail to meet these standards and who are determined not to change their ways. Yet these two difficulties can and must be overcome.

Three Categories of Underdeveloped Countries

Let us consider the initial problem of diversity.

Despite the wide variation among the developing countries, it is possible, I believe, to distinguish three major categories. These distinctions provide the basis for the criteria to which I refer.

In the first category of countries I would put the handful of nations which possess the preconditions for rapid economic and social advance and which are effectively using their own resources. These

nations may be characterized in general terms by the following advantages:

- a. A reasonably competent government, able to maintain law and order;
- b. An equitable tax system based primarily on the ability to pay with a good record of collection;
- c. A well-conceived national economic development plan for the allocation of natural resources and foreign assistance;
- d. An effective program of widespread land ownership;
- e. An integrated approach to community development that includes extension work, the use of volunteer leaders in school and roadbuilding;
- f. Reasonable incentives for private investment;
- g. Effective controls over their foreign exchange.

It is for the handful of developing nations that measure up to these high standards that this administration fought for the 5-year authority in the 1961 AID legislation; and the Congress provided it.

Several of them are now ready and able to move ahead increasingly on their own initiative toward self-sustaining development. Within the limits of our own resources, they deserve the highest priority in the programming of our development assistance. At the same time we should be cautious about lowering this priority standard because of short-term political pressures.

A second category lies at the other end of the spectrum. Here are the countries which are not yet qualified by skills or experience to absorb direct economic assistance even on a project basis.

Again congressional intent appears clear, for with regard to these countries, the development assistance act specified that

... programs of development of education and human resources through such means as technical cooperation shall be emphasized, and the furnishing of capital facilities for purposes other than the development of education and human resources shall be given a lower priority until the requisite knowledge and skills have been developed.

This suggests that in such countries we should concentrate on technical assistance and education programs to help build an administrative and economic structure which will eventually enable these countries effectively to use development assistance funds.

The Peace Corps and various Food-for-Peace programs can carry a major share of the current

load in countries in this category. This will enable us to demonstrate our concern for the people while their governments gain the experience to work out realistic plans and projects.

The remaining nations, in the third category—those between the extremes of readiness for major investment on the one hand and total lack of such readiness on the other—will prove the most difficult for which to devise criteria.

Many *ad hoc* judgments will continue to be necessary. Yet realistic criteria for each of these nations may be based within reasonable limits on the degree to which they approach the standards for category number one.

Our objective should be to encourage their efforts toward balanced, integrated development, with major emphasis on what happens to their *people* in the process of national growth and with due regard to their sense of community participation and individual dignity. Additional funds can be allotted to those which improve their operations along these lines, thereby encouraging them toward the priority-support category. Programs can be cut back where performance lags.

An examination of the experience in the United States with Federal grants-in-aid to our States may be helpful in developing our operating guidelines.

Insistence on Essential Reforms

The second obstacle to the enforcement of criteria for the distribution of our economic assistance is the resentment and resistance we will face from entrenched privileged groups in some recipient countries when we insist on a better performance.

If we act courageously in accordance with our congressional directives, we shall be pressing many nations to undertake major reforms in long-established social and economic habits.

Land reform and tax reform, to cite two particularly important examples, are inevitably hot domestic political issues. For example, when we press other governments to adopt even the most basic reform programs we may undercut the political positions of government leaders who have regularly supported us in the United Nations in the hope that we will maintain a flow of dollars regardless of their reactionary and outmoded internal policies. This in turn may result in angry speeches attacking "Yankee interference in our country's affairs."

If we seriously intend to carry out the real purpose of the aid program, such situations cannot be avoided. Yet the decision as to how hard we can press a government to carry out essential reforms at a more rapid pace involves a delicate political judgment which we must make on the merits of a specific case.

No doubt on some occasions overriding security or strategic considerations will force us to relax at least temporarily our pressures for reform. To cover such cases the law provides for aid through a special fund for "supporting assistance" or from the "emergency contingency fund."

Let us hope that expedient actions of this kind can be kept to a minimum and that we clearly recognize the nature and probable duration of each expediency. By and large we are impelled by sheer common sense and by clear-cut congressional mandates to support the basic institutional reforms which experience has taught us are necessary to economic progress and political stability.

We should never forget that expending aid *without* insisting on reforms is a kind of "interference"—interference on the side of the forces of the past rather than those of the future.

I can see no valid reason why American taxpayers should be taxed to help developing countries which lack the will or the vigor to help themselves.

The Bell report on the Philippines² in 1950 provides an example of the affirmative, *conditioned* approach to the distribution of economic assistance to which I refer.

In this case United States assistance was "strictly conditioned on steps being taken by the Philippine Government to carry out the recommendations outlined above, including the immediate enactment of tax legislation and other urgent reforms." The "recommendations outlined above" included tax reform, land distribution, a merit civil service, labor legislation, and a number of other specific and far-reaching steps.

Our insistence on these reforms encouraged the liberal reform elements in the Philippines to press for fundamental changes in the country's economic and social pattern. Thus, far from imped-

² For text of summary and recommendations contained in the report of the U.S. Economic Survey Mission to the Philippines headed by Daniel W. Bell, see BULLETIN of Nov. 6, 1950, p. 724.

ing growth and creating resentment against us, the United States espousal of these essential domestic reforms helped create the economic and political foundations on which subsequent forward-looking governments were elected to office.

Mobilizing Private Participation in Aid Program

4. *In the task of nation building in Latin America, Asia, and Africa we must mobilize both our private and governmental resources.*

Much of the strength of our free American society lies in its diversity. Our freedom is rooted in the varied organizations and institutions which are represented at this meeting and in the enormous network of citizen activity which they foster.

In accordance with the congressional directive to encourage private participation in the aid program, AID and its predecessors have already done much to draw on the talents and enthusiasm of private organizations.

Yet we must learn how to make even greater use of these resources. Governments alone cannot produce the diversified societies we are seeking to encourage. We are handicapping ourselves if we fail to enrich our aid program with the multitude of special skills and organizational know-how found among our citizen groups—not only those traditionally interested in foreign affairs but those whose horizons have tended to be limited to their immediate professional, cultural, or economic interests.

What is true of *private* American experience is also true of much governmental expertise not ordinarily tapped by an aid agency. State and local governments, for instance, can be drawn into associations with their counterparts overseas. Our Federal agencies in a dozen special fields need to become even more intimately involved in institution building abroad. "Foreign aid" has a need for the talents of every section of American society. Let us involve those talents to the hilt.

Spelling Out American Traditions to the World

5. *We should boldly spell out to the peoples of the recipient countries and the world our traditional American faith in widespread land ownership, in fair taxes based on the ability to pay, in broader educational opportunities, and in human dignity and justice.*

Our aid program will never work if the prin-

principles on which it is based are known only to the government officials with whom we deal abroad. It is precisely the points which I have discussed today which require emphasis in our public presentations.

The purpose of this overseas information effort is not simply to glorify the United States. It is to make it crystal clear to every man, woman, and child within reach of a radio or reading room that the nation of Jefferson and Lincoln still seeks a better life for all people everywhere, that we are still firmly committed to the economic and social reforms necessary to achieve this better life, and that the most lasting international partnerships are not among governments, which are constantly changing, but among people, who alone are enduring.

Just as we Americans seek to mobilize all resources needed to meet the challenge, so must we call on the people and government in each developing nation to rally its own resources. And let us never forget that the most vital of these resources is an informed people, insisting on and dedicated to the all-out effort which alone can provide themselves and their children with the basis for a life of decency, justice, and domestic peace.

Need for Public Understanding

This brings us to a final element upon which the success or failure of our aid program will ultimately depend: the understanding and support of the American people.

In my opinion the Federal Government has a responsibility to tell the American people about the objectives, methods, accomplishments—and failures—of this crucially important effort. The people of the United States have a right to know where their money is being spent, what it is being spent for, how well these programs are being administered, where and for what reasons Americans are working with peoples of other lands to help build free and independent societies.

If the people have this knowledge, if they understand the principles which Congress has laid down and the ways in which the President and AID are carrying out Congress' wishes, then I am convinced they will give this program the support it deserves.

But the sad truth is that they have not been getting the facts they are entitled to. For years the public information unit of the foreign aid

agency has been a deprived stepchild. It has been wholly inadequate to provide more than a bare minimum of the news which all of us as citizens and taxpayers deserve to have.

To make the AID program understandable to the American people requires pamphlets and books and films and speakers and conferences like this one. In short, it requires an adequate domestic information program and a staff to run it. I am confident that the new leadership of AID is aware of this need and is moving to provide the American people with the essential facts.

This leads me to my final point: Only *people* can make development assistance meaningful.

Our task abroad is to release the energies of the people of the developing nations so that they can work effectively toward economic progress, increased justice, and a sense of individual fulfillment and participation.

Our task here at home is to bring the vast resources and democratic traditions of the American people to bear on the most important and constructive task of our era: the creation of a world of reason and of peace.

The Alliance for Progress in Latin America—and the alliance for progress throughout the world—is essentially an alliance of free people working for the goals for which we Americans have stood since the days of Jefferson.

In this spirit let us get on with the job.

U.S. Deplores Coup d'Etat in Peru, Suspends Relations and Aid Programs

Following are texts of two Department statements read to news correspondents by Lincoln White, Director of the Office of News, together with the text of a White House statement read to correspondents by Pierre Salinger, White House Press Secretary.

DEPARTMENT STATEMENT OF JULY 18

A Peruvian Joint Armed Forces Command communique has announced that the Peruvian Armed Forces have deposed President [Manuel] Prado and assumed control of the Government. The communique also announced the suspension of the constitutional guarantees.

The Prime Minister spoke of his determination to maintain and perfect the independence, unity and neutrality of his country. He also was particularly appreciative of United States efforts in helping to achieve the peaceful settlement. In discussing the future of Laos, the Prime Minister stressed that the prosperity and well-being of the people of Laos depended upon full observance of the Geneva agreements by all signatories and upon the unity of purpose of the Lao people.

The President confirmed the determination of

the United States to work actively in supporting the independence and neutrality of Laos. He confirmed the willingness of the United States to offer in accordance with the spirit of the Declaration of Neutrality made by the Royal Government of Laos on July 9, 1962,² its moral and material support to the Lao people toward achieving their aspirations with dignity and freedom through adherence to the stated course of strict neutrality.

² For text, see *ibid.*

A Fresh Look at the Alliance for Progress

by Chester Bowles¹

Ever since my brief visit to Colombia with President Kennedy last December I have been anxious to return here to gain a better understanding of the great national effort on which you are embarking.

Nearly 2 years ago, here in Bogotá, the groundwork was laid for the Alliance for Progress²—dedicated to the creation of a truly “New World” of prosperity, opportunity, and justice. A year ago this month, at Punta del Este, 20 American nations solemnly pledged to carry forward this great effort for human betterment and dignity.³

Looking back over the past 12 months, we may wonder at the easy optimism with which so many of us Americans—North and South—embarked on this unprecedented undertaking. As the difficulties have become more clear, some observers have moved to the pessimistic extreme: The obstacles in their minds have suddenly assumed unyielding proportions; the problems have appeared too many and the time too short.

¹ Address made before the Colombo-American Chamber of Commerce and the American Society of Bogotá at Bogotá, Colombia, on Aug. 1 (press release 486; as-delivered text). Mr. Bowles is the President's Special Representative and Adviser on African, Asian, and Latin American Affairs.

² For background, see BULLETIN of Oct. 3, 1960, p. 533.

³ For background, see *ibid.*, Aug. 28, 1961, p. 355, and Sept. 11, 1961, p. 459.

I have come to Colombia because you in particular are demonstrating that the pessimists are wrong.

Here we see evidence that the objectives of the Alliance for Progress are not illusory.

Here we see solid economic, political, and social progress, some of it the fruit of many years of steady effort at national development, some of it the product of the special dedicated effort of recent months.

Here we see a national determination not only to produce more wealth but to distribute that wealth with an increasing measure of democratic justice to all of your people.

If you can continue to couple able planning with dedicated administration and the wise use of your resources, the success of the Alliance for Progress in Colombia is assured.

In order to put Colombia's impressive efforts in better perspective, let us consider what the alliance itself was set up to accomplish. Its objective can be briefly and clearly stated: Our purpose is to mobilize the resources of the 400 million people of the Americas so that opportunity, dignity, and justice should become the established right of all men in our hemisphere.

In many of the 19 Latin American nations

August 20, 1962

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SOURCE: The Department of State
Bulletin - Aug. 20, 1962

which are participating in the alliance three massive barriers now stand in the way:

1. The aching poverty of two-thirds of the people.

2. Apathy among many of the underprivileged, and a sense of hopelessness at the very magnitude of the challenge among some of their national leaders.

3. The assumption among many privileged groups that by one means or another they can defy the political and economic forces of our era and maintain the 19th-century *status quo*.

These barriers to the future of dignity, peace, and plenty which we wish to secure for ourselves must be destroyed.

This means that we must learn to utilize the natural riches of the earth for the benefit of all of the people, that we must stop wasting the potential talents of men and women who are now unhealthy and untaught, and that we must free the human spirit stifled by social and political systems which grossly distort the distribution of wealth, opportunity, and power.

As we move to meet this many-sided challenge, we will do well to examine some of the myths and assumptions which have limited our success in the past. For instance, it is time to abandon the narrow assumption that economic growth by itself will assure a happy, creative, democratic society.

As we consider and compare the characteristics of individual Latin American countries, we see dramatic evidence that increased economic production by itself will not assure orderly social and political development. Some of the most productive countries of Latin America already have per capita incomes greater than several European countries. Yet the record shows that these nations may be as politically explosive as the poorest, whose per capita income is no greater than that of Pakistan, Uganda, or Indonesia.

Importance of Social and Political Reforms

The record is clear: Unless basic social and political reforms go hand in hand with economic growth, increased output may simply widen the gap between rich and poor, increase social tensions, and create the ingredients for a political explosion.

The situation will be compounded if we approach the problems of national development

largely in terms of *industrial* expansion. Although industrialization deserves a high priority, in most Latin American countries political stability and increasing national purchasing power are dependent in large measure on what happens on the farms and in the villages.

As in other developing continents, a majority of Latin Americans live in these rural areas. In both a political and economic sense it is folly to neglect them. So long as they lack the purchasing power to buy the goods which the new urban factories are producing, the economy will remain far below its potential. Until they are brought into the mainstream of national life as active participants in the process of nation building, they will remain an explosive source of political instability.

Today in most rural areas of Latin America the majority of people are working as tenant farmers or landless laborers, with inadequate markets, schools, and clinics, and few basic human rights. The appalling slums which characterize so many of the large cities of Latin America are a reflection of this lack of rural opportunity. Men and women unable to make a decent living on the land move to the cities in search of jobs, and because adequate urban housing and social services are lacking the result is often still greater frustration, bitterness, and political divisions.

Experience in development work on three continents suggests that the following seven points are basic to the development of dynamic, progressive, democratic societies:

1. A national plan which takes account of national resources and establishes national priorities and objectives.

2. The determination that economic growth will be widely shared and that there shall be increasing opportunities for all citizens.

3. The courage to tax all citizens in relation to their ability to pay, to challenge old patterns of privilege, and to assure an increasing measure of social justice.

4. A realization that agricultural production is the foundation of every economy, that every rural family should have a right to cultivate its own land, and that every rural family should be made to feel an integral part of the process of national growth.

5. A pragmatic approach to economic investment that combines strong incentives for private investment and a recognition of the importance

of individual initiative with an acceptance of governmental responsibility for national planning, priorities, and direction and support for the private sector.

6. An efficient and honest public administration.

7. A sense of national morale and purpose that gives to all elements of society, public and private, that essential feeling of personal participation in the great adventure of human progress.

Colombia's Accomplishments

When we consider these seven critical points in regard to Colombia, we see why your nation stands in the vanguard of the Alliance for Progress. Let us briefly consider your accomplishments:

Colombia now has a carefully developed plan for its national development that gives wide scope to private initiative, with strong emphasis on economic justice.

In the past 3 years Colombia has more than doubled its education budget. Today it is one of the few countries in the world that spends more on schooling than on its armed forces.

In 1960 you enacted one of the most progressive tax laws in Latin America. Income taxes provide over 40 percent of national government revenues. Import taxes supply another 25 percent.

Last year you established a major land reform program that is designed to give all rural families an opportunity to own their own land. This program, I understand, is now actively underway.

Rural development is being further promoted by substantial planned investment in water, sewerage, and educational facilities.

Through *Acción Comunal* and similar private undertakings, the people of hundreds of remote villages are being drawn into community efforts at self-improvement through democratic action.

A favorable climate for private investment has been created. Your antimonopoly laws encourage fair competition.

Your economic stabilization program has successfully kept down inflation.

Finally, despite vigorous political partisanship, the Colombian people have been able to combine constructive nation building with democratic debate.

This is a great record. You have a right to be enormously proud of it.

However, I have yet to meet a self-satisfied

Colombian. Indeed, I find broad agreement everywhere that the hardest work lies ahead—the unglamorous, day-by-day effort to push forward the programs that have been agreed to and to make them steadily more effective.

Under the agreement of Punta del Este the United States offers you its admiration for a difficult job well begun and its vigorous support for your future efforts.

Latin American countries which show a similar willingness and capacity to muster their own resources, to remove their own domestic obstacles to growth, and to provide a better distribution of the wealth which they are producing will receive similar support.

Standards and Priorities for U.S. Aid

But let me say with deep conviction that the United States does not intend to subsidize the *status quo* in Latin America or anywhere else. We cannot properly be expected to support governments which are unable, unwilling, or unprepared to take the hard decisions which are essential if our common economic, social, and political objectives are to be secured.

The citizens of my country pay extremely high taxes at steep, progressive rates. Personal and corporate income taxes now provide most of the revenues of our Federal Government; the percentage is higher than almost any country in the world. This year we will spend nearly \$5 billion of our tax funds to assist developing nations in Latin America, Asia, and Africa to achieve a better life for their people. More than 80 countries are now seeking some form of direct United States aid.

The claims on our aid budget are enormous. If our assistance is to be truly effective, standards and priorities for the distribution of aid must be developed, with high priorities for those nations which are most able and willing to do their part.

In the aid legislation recently passed by the United States Congress and about to be signed by President Kennedy,⁴ such standards can be clearly established. Let me read you some of the language of this legislation which refers particularly to the Alliance for Progress and which lays down the framework within which our foreign aid ad-

⁴ See p. 291.

ministrators must operate. It is the sense of the Congress, the law declares,

. . . that vigorous measures by the countries . . . of Latin America to mobilize their own resources for economic development and to adopt reform measures to spread the benefits of economic progress among the people are essential to the success of the Alliance for Progress and to continued significant United States assistance thereunder.

In furnishing this assistance, the law continues,

. . . the President shall take into account . . . in particular the extent to which the recipient country . . . is showing a responsiveness to the vital economic, political, and social concerns of its people and demonstrating a clear determination to take effective self-help measures. . . .

These provisions outline the basis of our continuing contribution to the governments and people of Latin America. In my opinion they are sound and reasonable. Indeed, money that is given in disregard of these provisions will serve only to feed the gap between rich and poor, to undermine faith in democracy, and to create new frustrations and bitterness.

The people of Colombia and the United States believe in democratic institutions. We believe in private enterprise and initiative. We believe in economic and social justice. We believe above all in the basic decency and capacity of *people*—and I mean of *all* people.

Here in Colombia you are providing a stirring example of what able, free, dedicated men can accomplish in behalf of human betterment. You are among the pace setters for this dynamic, awakening continent. As more and more Latin American nations move vigorously ahead with programs of reform and development, our high hopes of Punta del Este gradually will be realized.

Let us work together, shoulder to shoulder, to justify those hopes.

Motorcade To Mark Highway Opening In Central America and Panama

The Department of State released on July 31 (press release 482) an announcement by the U.S. Organizing Committee for the Ninth Pan American Highway Congress that an official motorcade will celebrate the opening of the Pan American Highway to through traffic between the Panama

Canal and the United States in the spring of 1963.

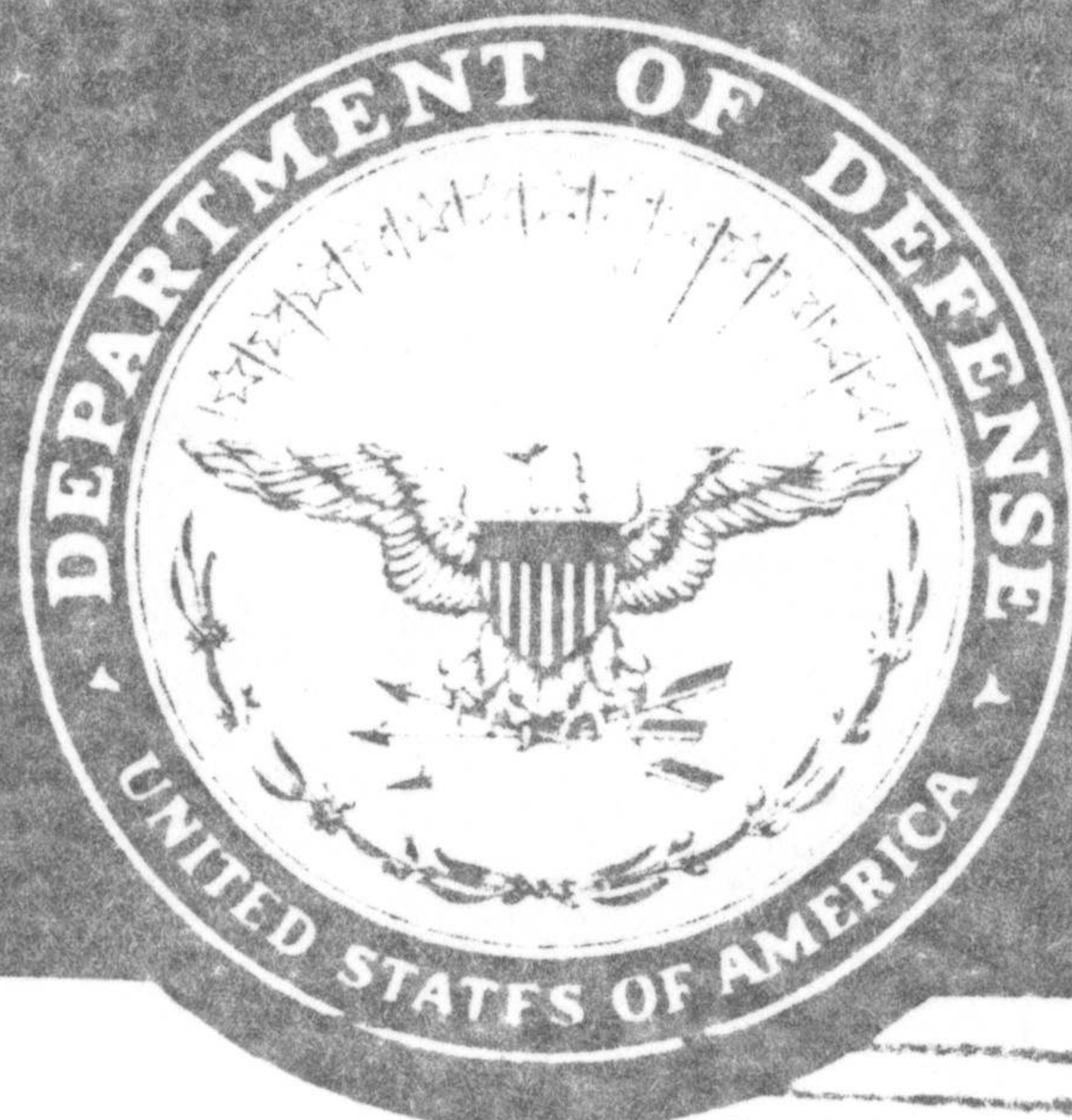
The motorcade will take place immediately prior to the Congress, which is scheduled to open at Washington, D.C., May 6 next year. Leading delegates from the American Republics and Canada will be invited to participate. Under present plans they will be transported in air-conditioned buses, starting from Panamá, R.P., about the middle of April and traversing the approximately 1600-mile route of the highway to the Guatemala-Mexico border. They will continue to Mexico City in the buses, then fly by charter plane to Detroit, Mich., for inspection of automobile factories and proving grounds, and finally visit Niagara Falls, Ont., and New York City before reaching Washington on May 4.

The idea of conducting a motorcade over the new highway to signalize its opening for through traffic all the way from Panama to the United States originated several years ago in the Pan American Highway Congresses and was promptly supported by resolutions of the Inter-American Travel Congresses and the Inter-American Federation of Automobile Clubs. These organizations include in their membership all the countries of South, Central, and North America. Thus the motorcade project, while arranged by the U.S. hosts for the 1963 Highway Congress, will have complete intercontinental sponsorship. Consideration is also being given to facilitating as far as possible the travel of commercial vehicles and numerous private motorists who, although not part of the official group, may be expected to make the trip about the same time.

The opening of the inter-American segment of the Pan American Highway is regarded as an outstanding event in the economic history of the Americas. Costing close to \$1 billion to date, it has been a cooperative international enterprise since its inception 30 years ago, with the U.S. contributing about two-thirds of the construction expenditures and the Republics of Panama, Costa Rica, Nicaragua, Honduras, El Salvador, and Guatemala providing the remainder. Mexico has built its section of the highway with its own funds. While various parts of the route have been in use for many years, closing of the final gaps has been delayed by difficult bridge-building problems in Costa Rica and Guatemala. These have now been solved, finishing touches are being put on the last small bridges, and the highway will be open to

NEWS RELEASE

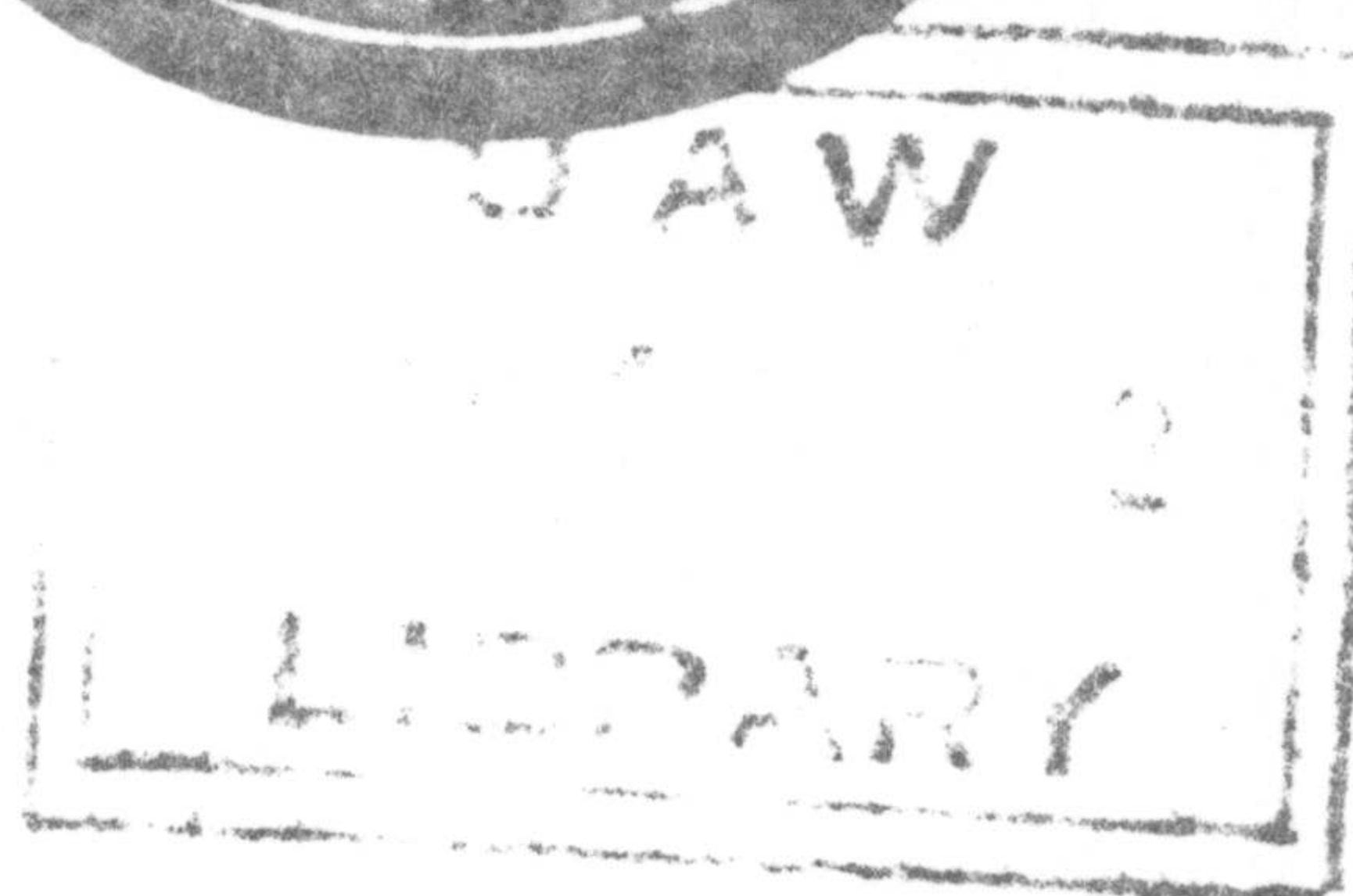
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REMARKS OF
SECRETARY OF DEFENSE ROBERT S. McNAMARA
AT THE COMMENCEMENT EXERCISES
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN
SATURDAY, JUNE 16, 1962

I am glad to be home, and I am particularly glad to be here for a university occasion. For this University gives meaning and focus to life in Ann Arbor -- even for those who are not privileged to be associated with it directly -- as the academic community serves to clarify the objectives and focus the energies of the Free World.

President Kennedy aptly described the function of the university when he said: "The pursuit of knowledge ... rests ... on the idea of a world based on diversity, self-determination, and freedom. And that is the kind of world to which we Americans, as a nation, are committed by the principles upon which the great Republic was founded. As men conduct the pursuit of knowledge, they create a world which freely unites national diversity and international partnership."

Commencement orators like to point to the fact that what we celebrate here is not an end, but a beginning. I prefer to take my text from another aspect of the occasion which we are observing today.

The ancient formula for the award of academic degrees admits you into a long-established community, whether it be the fellowship of educated men, or the ancient and honorable company of scholars, of which you are the newest members. This community embodies the

MORE

highest ideals of the Free World. Its membership includes people of every race, color, and creed. They share a common language, the language of ideas. They are dedicated to the fullest possible development of the individual human potential. And the only requirement for admission is a demonstrated capacity for and commitment to the use of one's powers of reason.

What I want to talk to you about here today are some of the concrete problems of maintaining a free community in the world today. I want to talk to you particularly about the problems of the community that bind together the United States and the countries of Western Europe.

*MIT
summary
page 5* Europe is the source of many of our traditions. One of these is the tradition of the university, which we can trace back to the groves of Academe, on the same site where only a few weeks ago the foreign ministers and ministers of defense of the European nations and the United States met to discuss their common problems.

I need scarcely remind you that Europe is one of the great sources of the American idea of freedom, and that it was the European philosophers of the seventeenth and eighteenth centuries who shaped the thinking of our own founding fathers. For all of us, Europe has been our teacher since we first learned to read.

One of the most impressive lessons that Europe has provided us recently is the lesson of her revival from the ashes of destruction at the end of the Second World War. The national economies of Europe were almost at standstill 15 years ago. Their capital plant was largely destroyed, either directly by bombing, or indirectly by years of neglect and patchwork repair. The people were exhausted by six years of war,

and a large part of the most productive age group had been wiped out. Yet in the last 10 years, they have managed to increase the production of steel and electricity by over 130 percent each, and this has been typical of the recovery pattern.

The pump-priming help of the American Marshall Plan came at a crucial time in the process of European recovery. But the genius of the plan as envisaged by men like George Marshall and Harry Truman, was to help the Europeans help themselves.

At the same time that the nations of Europe were rebuilding at home, they were going through the difficult and often painful process of re-establishing their relationships with the peoples of Africa and Asia, no longer as a master and servant, but as members of the human race, all equally entitled to develop their individual capabilities. This process of change is by no means complete, and there are still difficult times ahead. But the joint achievement of Europe and its former colonies in revising their relations with each other is at least as impressive as the economic recovery of Europe itself.

What may be the greatest post-war European achievement is still in the making. The nations of Europe have begun to level the outmoded barriers that confined their individual economies within national boundaries. As Jean Monnet, the principal architect of the new Europe puts it,

"An entirely new situation has been created in the world, simply by adding six countries together. It's not an addition; in fact, it's a multiplication. You multiply the capabilities of the countries you unite. A dynamic process is beginning that is changing the face of Europe and the role of Europeans in the world."

The making of Europe has only begun, and indeed it is perhaps at its most critical stage. But we should not overlook the fact that French coal and German steel now move freely across the continent, and that German refrigerators and Italian shoes are being sold increasingly without restriction in Belgian department stores.

All of these achievements have been accomplished under pressure from titanic forces which make a rational organization of human society increasingly difficult both for the Europeans and for ourselves. Let me mention some of these forces.

We are confronted with a population explosion resulting from our own success in coping with disease and abnormalities, and by now threatening to double the earth's population by the end of this century. Unless we can control this explosion in the poor and resource-limited countries, the effects of economic growth may be cancelled out by population growth, and unsatisfied rising expectations, particularly in the younger nations, may upset the delicate balance of political stability.

We are borne along by the accelerating pace of science and technology. In this country alone, new inventions are patented at a rate of 50,000 a year. Our population of scientists and engineers has increased by more than 40 per cent in the last eight years. In fact, 80 per cent of all scientists and engineers who have lived throughout history are alive today.

We are faced with an extraordinary increase in the number of national states. Since World War II, 35 new nations have been formed. Each new nation expresses the natural desire for self-determination and self-government. But their numbers complicate the problem of international diplomacy at the same time that military and economic developments increase our interdependence. Every nation is more and more directly affected by the internal situation of its neighbors, and the globe has shrunk to the point where we are all each other's neighbors.

MORE

Lastly, we live in the shadow of the Sino-Soviet drive for world domination--surely not the only shadow on the world today, but one of the longest and deepest. By itself it represents the most serious military force this nation has ever faced; by its exploitation of the entire world's troubles, it is a threat of a kind that is as new to the world as the rising technologies and populations and national sovereignties themselves.

Resume In the face of all these challenges, the ultimate objective of the free world is to establish a system of peaceful world order, based on the dignity of the individual and dedicated to the free development of each man's capacities. The members of the North Atlantic community -- the Europeans and ourselves -- bear a special responsibility to help achieve this objective. This responsibility derives from the strength of our internal institutions and the wealth of our material resources.

But we cannot hope to move toward our objective unless we move from strength. Part of that strength must be military strength. But I want to emphasize that we see our military strength not as the means of achieving the kind of world we seek, but as a shield to prevent any other nation from using its military strength, either directly or through threats and intimidation, to frustrate the aspirations we share with all the free peoples of the world. The aggressive use of military strength is foreign to the best traditions of the United States. And, as the President pointed out last week, "the basic problems facing the world today are not susceptible of a final military solution."

What the military component of our national power must do, and what we must see that it is capable of doing, is to assure to the peoples of the Free World the freedom to choose their own course of development.

Yet the nature and extent of the military power base needed to meet the entire spectrum of challenges confronting the Free World is beyond the capacity of any single nation to provide. Since our own security cannot be separated from the security of the rest of the Free World, we necessarily rely on a series of alliances, the most important of which is the North Atlantic Treaty Organization.

NATO was born in 1949 out of the confrontation with the Soviet Union that ensued from the breakdown in relations between the former wartime allies.

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resume
top of
page 7*

The Soviet Union had absorbed the states of eastern Europe into its own political framework, most dramatically with the Czechoslovakian coup of 1948. It had been fomenting insurrection in Greece, menacing Turkey, and encouraging the Communist parties in Western Europe to seize power in the wake of postwar economic disorder. The sharpest threat to Europe came with the first Berlin Crisis when the Russians attempted to blockade the western sectors of the city. Our response was immediate and positive. President Truman ordered an airlift for the isolated population of West Berlin which, in time, denied the Soviets their prize. The Marshall Plan, then in full swing, was assisting the economic recovery of the Western European nations. The Truman Doctrine had brought our weight to bear in Greece and Turkey to prevent the erosion of their independence.

But Western statesmen concluded that it would be necessary to secure the strength and growth of the North Atlantic community with a more permanent arrangement for its defense. The effective defense of Western Europe could not really be accomplished without a commitment of the United States to that defense for the long term. We made this commitment without hesitation. Arthur Vandenberg, one of the chief architects of NATO, expressed the rationale of the organization in the Senate debate preceding passage of the treaty,

"this is the logical evolution of one of our greatest American idioms, 'united we stand, divided we fall.'"

Summary
The North Atlantic Alliance is a unique alignment of governments. The provision for the common defense of the members has led to a remarkable degree of military collaboration and diplomatic consultation for a peacetime coalition. The growth of the alliance organization has accelerated as the task of defending the treaty area has increased in scope, size and complexity. NATO has had its stresses and strains, but it has weathered them all.

Today, NATO is involved in a number of controversies, which must be resolved by achieving a consensus within the organization in order to preserve its strength and unity. *(omit)* The question has arisen whether Senator Vandenberg's assertion is as true today as it was when he made it 13 years ago.) Three arguments have raised this question most sharply:

First It has been argued that the very success of Western European economic development reduces Europe's need to rely on the U.S. to share in its defenses.

Secondly It has been argued that the increasing vulnerability of the U.S. to nuclear attack makes us less willing as a partner in the defense of Europe, and hence less effective in deterring such an attack.

And thirdly It has been argued that nuclear capabilities are alone relevant in the face of the growing nuclear threat, and that independent national nuclear forces are sufficient to protect the nations of Europe.

I believe that all of these arguments are mistaken. I think it is worthwhile to expose the U.S. views on these issues as we have presented them to our allies. In our view, the effect of the new factors in the situation, both economic and military, has been to increase the interdependence of national security interests on both sides of the Atlantic,

the effect has been to
and to enhance the need for the closest coordination of our efforts.

A central military issue facing NATO today is the role of nuclear strategy. Four facts seem to us to dominate consideration of that role. *Taken together they*
~~All of them~~ point in the direction of increased integration to achieve our common defense. First, the Alliance has over-all nuclear strength adequate to any challenge confronting it. Second, this strength not only minimizes the likelihood of major nuclear war, but makes possible a strategy designed to preserve the fabric of our societies if war should occur. Third, damage to the civil societies of the Alliance resulting from nuclear warfare *indeed* could be very grave. Fourth, improved non-nuclear forces, well within Alliance resources, could enhance deterrence of any aggressive moves short of direct, all-out attack on Western Europe.

Let us look at the situation today. First, given the current balance of nuclear power, which we confidently expect to maintain in the years ahead, a surprise nuclear attack is simply not a rational act for any enemy. Nor would it be rational for an enemy to take the initiative in the use of nuclear weapons as an outgrowth of a limited engagement in Europe or elsewhere. I think we are entitled to conclude that either of these actions has been made highly unlikely.

Second, and equally important, the mere fact that no nation could rationally take steps leading to a nuclear war does not guarantee that a nuclear war cannot take place. Not only do nations sometimes act in ways that are hard to explain on a rational basis, but even when acting in a "rational" way they sometimes, ~~indeed disturbingly often~~, act on the basis of misunderstandings of the true facts of a situation. They

misjudge the way others will react, and the way others will interpret what they are doing. We must hope, indeed I think we have good reason to hope, that all sides will understand this danger, and will refrain from steps that even raise the possibility of such a mutually disastrous misunderstanding. We have taken unilateral steps to reduce the likelihood of such an occurrence. We look forward to the prospect that through arms control, the actual use of these ~~terrible~~ weapons may be completely avoided. (It is a ^{OMIT} problem not just for us in the West, but for all nations that are involved in this struggle we call the Cold War.)

For our part, we feel we and our NATO allies must frame our strategy with this terrible contingency, however remote, in mind. Simply ignoring the problem is not going to make it go away.

The U. S. has come to the conclusion that to the ~~extent feasible~~ ^{possible}, basic military strategy in a possible general nuclear war should be approached in much the same way that more conventional military operations have been regarded in the past. That is to say, principal military objectives, in the event of a nuclear war stemming from a major attack on the ^{NATO} Alliance, should be the destruction of the enemy's military forces, not of his civilian population.

The very strength and nature of the Alliance forces make it possible for us to retain, even in the face of a massive surprise attack, sufficient reserve striking power to destroy an enemy society if driven to it. In other words, we are giving a possible opponent the strongest imaginable incentive to refrain from striking our own cities.

The strength that makes these contributions to deterrence and to the hope of deterring attack upon civil societies even in wartime does not come cheap. (We ^{OMIT} are confident that our current nuclear programs are adequate and will continue to be adequate for as far into the future as we can reasonably foresee.) During the coming fiscal year, the United States plans to spend close to \$15 billion on its nuclear weapons to assure their adequacy. For what this money buys, there is no substitute.

In particular, relatively weak national nuclear forces with enemy cities as their targets are not likely to be sufficient to perform even the function of deterrence. If they are small, and perhaps vulnerable on the ground or in the air, or inaccurate, a major antagonist can take a variety of measures to counter them. Indeed, if a major antagonist came to believe there was a substantial likelihood ^{that such forces would be} ~~of it being~~ used independently, this force would be inviting a pre-emptive first strike against it. In the event of war, the use of such a force against the cities of a major nuclear power would be tantamount to suicide, whereas its employment against significant military targets would have a negligible effect on the outcome of the conflict. Meanwhile, the creation of a single additional national nuclear force encourages the proliferation of nuclear ^{weapons} ~~power~~ with all of its attendant dangers.

In short, then, limited nuclear capabilities, operating independently, are dangerous, expensive, prone to obsolescence, and lacking in credibility as a deterrent. (Clearly, ^{OMIT} the United States nuclear contribution to the Alliance is neither obsolete nor dispensable.)

At the same time, the general strategy I have summarized magnifies the importance of unity of planning, concentration of executive authority, and central direction. There must not be competing and conflicting strategies to meet the contingency of nuclear war. We are convinced that a general nuclear war target system is indivisible, and if, despite all our efforts, ~~nuclear~~ ^{such a} war should occur, our best hope lies in conducting a centrally controlled campaign against all of the enemy's vital nuclear capabilities, while retaining reserve forces, all centrally controlled.

We know that the same forces which are targeted on ourselves are also targeted on ^{European} allies. Our own strategic retaliatory forces are prepared to respond against these forces, wherever they are and whatever their targets. This mission is assigned not only in fulfillment of our treaty commitments but also because the character of nuclear war compels it. More specifically, the U. S. is as much concerned with that portion of Soviet nuclear striking power that ~~can reach~~ ^{is directed against} Western Europe as with that portion that also can reach the United States. In short, we have undertaken the nuclear defense of NATO on a global basis. This will continue to be our objective. In the execution of this mission, the weapons in the European theater are only one resource among many.

omit resume top of next page There is, for example, the POLARIS force, which we have been substantially increasing, and which, because of its specially invulnerable nature, is peculiarly well suited to serve as a strategic reserve force. We have already announced the commitment of five of these ships, fully operational, to the NATO Command.

This sort of commitment has a corollary for the Alliance as a whole. We want and need a greater degree of Alliance participation in formulating nuclear weapons policy to the greatest extent possible. We would all find it intolerable to contemplate having only a part of the strategic force launched in isolation from our main striking power.

Resume
We shall continue to maintain powerful nuclear forces for the Alliance as a whole. As the President has said, "Only through such strength can we be certain of deterring a nuclear strike, or an overwhelming ground attack, on our forces and allies."

But let us be quite clear about what we are saying and what we would have to face if the deterrent should fail. This is the almost certain prospect that, despite our nuclear strength, all of us would suffer deeply in the event of major nuclear war.

We accept our share of this responsibility within the Alliance. And we believe that the combination of our nuclear strength and a strategy of controlled response gives us some hope of minimizing damage in the event that we have to fulfill our pledge. But I must point out that we do not regard this as a desirable prospect, nor do we believe that the Alliance should depend solely on our nuclear power to deter actions not involving a massive commitment of any hostile force. Surely an Alliance with the wealth, talent, and experience that we possess can find a better way than extreme reliance on nuclear weapons to meet our common threat. We do not believe that if the formula, $e=mc^2$, had not been discovered, we should all be Communist slaves. On this question, I can see no valid ~~reason~~^{basis} for a fundamental difference of ~~view~~^{opinion} on the two sides of the Atlantic.

(With the ^{OR} Alliance possessing the strength and the strategy I have described, it is most unlikely that any power will launch a nuclear attack on NATO.) For the kinds of conflicts, both political and military, most likely to arise in the NATO area, our capabilities for response must not be limited to nuclear weapons alone. ^{It is true} The Soviets have superiority in non-nuclear forces in Europe today. But that superiority is by no means overwhelming. Collectively, the Alliance has the potential for a

successful defense against such forces. In manpower alone, NATO has more men under arms than the ^{total of the} Soviet Union and its European satellites. We ^{in the U.S.} have already shown our willingness to contribute through our divisions now in place on European soil. In order to defend the populations of the NATO countries and to meet our treaty obligations, we have put in hand a series of measures to strengthen our non-nuclear power. We have added \$10 billion for this purpose to the previously planned level of expenditures for fiscal years 1962 and 1963. To tide us over while new permanent strength was being created, we called up ^{160,000} ~~158,000~~ reservists. We will be releasing them this summer, but only because in the meantime we have built up on an enduring basis more added strength than the call-up temporarily gave us. The number of U. S. combat-ready divisions has been increased from 11 to 16. (Stockpiled in Europe now are full sets of equipment for two additional divisions; the men of these divisions can be rapidly moved to Europe by air.)

We expect that our allies will also undertake to strengthen further their non-nuclear forces, and to improve the quality and staying power of these forces. These achievements will complement our deterrent strength. With ^{such} improvements ~~in Alliance ground force strength and staying power, improved non-nuclear air capabilities, and better equipped and trained reserve forces,~~ we can be assured that no deficiency exists in the NATO defense of this vital region, and that no aggression, small or large, can succeed.

^{To summarize}
I have described very briefly the United States' views on the role of nuclear forces in the strategy of the Alliance. I have pointed out that the Alliance necessarily depends, for the deterrance of general nuclear war, on the powerful and well protected nuclear forces of ~~the~~ ^{this country} ~~United States~~, which are necessarily committed to respond to enemy nuclear

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strikes wherever they may be made. At the same time, I have indicated the need for substantial non-nuclear forces within the Alliance to deal with situations where a nuclear response may be inappropriate or simply not believable. Throughout I have emphasized that we in the Alliance all need each other.

I want to remind you also that the security provided by military strength is a necessary, but not sufficient, condition for the achievement of our foreign policy goals, including our goals in the field of arms control and disarmament. Military security provides a base on which we can build Free World strength through the economic advances and political reforms which are the object of the President's programs, like the Alliance for Progress and the Trade Expansion legislation. Only in a peaceful world can we give full scope to the individual potential, which is ^{our} ~~for us~~ the ultimate ^{objective} ~~value~~.

A distinguished European visited the United States last month as a guest of the President. Andre Malraux, French Minister of State for Cultural Affairs, is an eminent novelist and critic. He led an archaeological expedition to Cambodia and fought in the Spanish Civil War and the French Resistance Movement. ^{during his visit to our country} Malraux paid a moving tribute to our nation when he said: "The only nation that has waged war but not worshipped it, that has won the greatest power in the world but not sought it, that has wrought the greatest weapon of death but has not wished to wield it... May it inspire men with dreams worthy of its action."

The community of learning to which you have been admitted carries with it great privileges. It also carries great responsibilities. And perhaps the greatest of these is to help ensure the wise use of our national power. Let me paraphrase Malraux: May your dreams be worthy of action and your actions be shaped by your dreams.

END

JULY 30, 1962

McNAMARA'S STRATEGY — *"The United States has come to the conclusion," said Secretary of Defense McNamara on June 16, "that . . . principal military objectives in the event of a nuclear war stemming from a major attack on the alliance, should be the destruction of the enemy's military forces, not of his civilian population." It may then be possible, he said, to engage in thermonuclear war while "preserving the fabric of our societies." This speech has provoked widespread discussion, including charges — and denials — that the Kennedy Administration has endorsed a "first strike." Michael Brower, who teaches political economy at the MIT School of Industrial Management, here opens a debate which will be continued in subsequent issues by Morton Halperin and Robert Osgood.*

Controlled Thermonuclear War

by Michael Brower

When the Kennedy Administration took office it inherited an unresolved debate about nuclear strategy. On one side stood Navy officers like Admiral Burke and Army officers like General Taylor, supported by such scientists as George Rathjens, Leo Szilard, Bernard Feld, Richard Leghorn, and the President's Science Advisor Jerome Wiesner, who argued that neither the United States nor the Soviet Union could hope during the 1960's to initiate a thermonuclear war without incurring unacceptable retaliation. The only function of the US nuclear arsenal would therefore be to deter the Soviets from initiating such a war, and to prevent them from blackmailing us or our allies by threatening to do so. Efforts to meet Soviet diplomatic or conventional military moves by threatening to start a thermonuclear war would, then, be either hot air or madness. According to this school of thought the only sane way to parry non-nuclear threats — including a possible massive Soviet ground attack in Europe — would be to strengthen Western non-nuclear forces. In the nuclear realm all the Pentagon would need to implement this second-strike-only strategy would be what is variously called a "balanced," "limited," "finite," "minimum," or "pure" deterrent: enough missiles hidden underground and under the sea to destroy Russia's major cities after surviving the worst attack our intelligence indicated the Soviets could conceivably mount.

On the other side of the debate were Air Force generals like Nathan Twining, Curtis LeMay and Thomas White, supported in part (and with various limitations and modifications) by theorists such as Herman Kahn

and Deputy Assistant Secretary of Defense Henry Rowen (both then with the RAND Corporation). These strategists claimed that America still needed nuclear superiority over the Soviet Union because if nuclear war ever came, either at our initiative or theirs, we would want not only to destroy Soviet cities but also Soviet nuclear forces. Only by destroying these forces could we end the war on favorable terms.

This doctrine was known as "counter-force." Under Eisenhower it was the accepted strategy, although the Air Force never got all the hardware it wanted to implement it. To make it work the US needed exact information about the location of Soviet missiles and bombers. (Hence the U-2 and now the Samos reconnaissance satellite.) We also needed at least two or three (and possibly more) missiles for each known Soviet missile or air base, in order to be sure of destroying them should war come. (Hence superiority.)

Given the Truman-Eisenhower doctrine that under certain circumstances (notably a massive ground attack on Europe) the US would launch a nuclear first strike, US acceptance of a "counter-force" strategy was virtually inevitable. Neither the Soviets nor our European allies would believe in our threat to unleash SAC unless we could do it without having American society destroyed by Soviet retaliation. Still, counter-force was not a purely first-strike doctrine. Even if the Soviets struck first, they would presumably not use every missile and bomber they had, and it would still be of some importance for us to destroy those that remained. This would give Americans who had survived

the Soviet first strike a better chance of surviving the war and would give America a larger voice in writing the peace. Yet the ability to attack largely empty Soviet missile pads and alerted Soviet bomber bases, while of some value, did not seem very important, and most of those who felt strongly about the development of counter-force weapons and targeting plans thought of this primarily as a first-strike doctrine.

But counter-force had deficiencies. Even the most optimistic Air Force planners were convinced that we could never knock out all Soviet missiles and bombers in a first strike. Enough might survive to inflict staggering losses on the US — perhaps 50 or 100 million. If this was the price of a first strike, both Europeans and Russians might well doubt we were prepared to pay it. And once they began to doubt, conventional attack on Europe began to seem conceivable, at least to some academic theorists.

Kennedy's Dilemma

In Kennedy's first six months there were indications that we were moving away from counter-force toward limited deterrence. Two special Defense messages to Congress requested extra funds to increase our ability both to fight conventional wars and to ride out any nuclear attack and still respond. In both messages the President explained our strategy in the language of limited deterrence: e.g. "Our strategic arms and defense must be adequate to deter any deliberate nuclear attack on the US or our allies — by making clear to any potential aggressor that sufficient retaliatory forces will be able to survive a first strike and penetrate his defense in order to inflict unacceptable losses upon him." Many authors and students of defense policy assumed Kennedy was leading up to a renunciation of the first use of nuclear weapons, at least on the strategic level, and preparing to rely on the growing conventional power of the West to deter conventional Soviet aggression.

Nevertheless President Kennedy had inherited a counter-force doctrine which called for hitting all known Soviet bases (and many cities as well), a huge set of photos of the Soviet Union from the U-2 flights, and a Samos reconnaissance satellite in late stages of development. He also inherited an overwhelming superiority in nuclear bombers and a slight but rapidly growing advantage in missiles. Strong domestic forces militated against Kennedy's dropping counter-force. The Democrats still felt vulnerable to the charge of appeasement. Besides, they had campaigned in 1960 on the inadequacy of our missile forces, and it was hard enough to admit that our forces were in fact adequate, without going all the way and saying that they were now, or soon would be, too large. Then too, the coun-

try was struggling (unsuccessfully, it now appears) out of a recession, which is not an easy time to cut down bomber and missile production. Finally, to accept a minimal second-strike-only deterrent seemed to mean resigning from part of the arms race and accepting a draw. This would have flown in the face of much of the American tradition, and the upbringing of many top governmental leaders.

Given the nuclear lead and the knowledge of Soviet base locations that he inherited, and given the forces pressing on him for military expansion, it would have been hard for any President to reverse our course. Yet President Kennedy, notably in his United Nations speech, showed signs of understanding the horrors that lie down the road we are following. Had no other factors intervened he might still have taken the course of greater restraint. Unfortunately, serious problems arose in Europe, and these were apparently decisive. How could we defend Europe (and especially Berlin) from a major conventional attack if we didn't build and maintain a first strike nuclear capability? And how could we stop the growth of an independent nuclear force in France (and, soon, in other countries) if our pledge to use US nuclear weapons in defense of Europe looked like an only half believable pledge to commit suicide?

The "conventional attack" problem at first seemed soluble. President Kennedy began to revamp the US Army, raising its combat strength from 11 to 16 divisions and developing newer and better conventional arms and air-lift. He also increased the pressures on our allies to meet their NATO force goals (though with less immediate result).

But then came Khrushchev's renewed efforts to change the status of Berlin and East Germany. According to Walter Lippmann, the President came back from Vienna in June with the distinct impression that Khrushchev was going to use force of some kind to make us give up West Berlin. President Kennedy rushed US troops to Europe, stockpiled supplies for still more divisions, called up reserves and guard units, and lit hotter fires under the slow-moving Europeans to get them to meet their quotas. All of this "worked," in the sense that it improved the conventional defenses of Western Europe. By August 3 the *Wall Street Journal* was able to report that the West had more armed men on the Central European front than the Soviets did. (The notorious 175 Soviet divisions were, the Pentagon has announced, highly over-rated. Many are pinned down preventing revolts in Hungary, Poland, and East Germany. Many are far back in Russia. Many are far below strength. Even at full strength Soviet divisions are smaller than Western divisions.) Since it has long been recognized that conventional forces can maintain an adequate defense against attacking forces twice (and

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sometimes even three or more times) their strength, East-West parity seemed to provide a considerable margin of safety against most dangers.

But in Berlin the West was not, militarily speaking, on the defensive. If the Soviets or the East Germans cut our supply lines, NATO forces would have to push forward through scores of miles of perhaps stubbornly held East German territory. (Apparently an air lift is no longer considered technically feasible.) All the advantages which accrue to the defender would in this case favor the Communists, not the West. As a result, the armed defense of Western rights in Berlin seemed then, and still seems today, impossible with any foreseeable levels of conventional Western forces. The President, determined to defend Berlin by force rather than negotiate under heavy pressure, could not do so without resorting to the use of nuclear weapons. (There is considerable evidence that US and British forces were then, and are perhaps still today, so poorly equipped and trained with conventional arms that they would have had to use nuclear weapons in heavy fighting no matter what the military situation.) Since Western "tactical" nuclear weapons could be at least partly matched by the Soviets, and since most strategists agreed that their use might very quickly escalate upward into general war, the President found himself also forced to imply, if not directly threaten, that the US would if necessary use its whole arsenal of bombs and missiles to defend Berlin. His main technique for trying to make this seem believable to Khrushchev, aside from raising the degree of involvement of US forces on the spot, was to emphasize civil defense. He, or his advisors, also began to search for a nuclear strategy which might allow him to defend Berlin without destroying America.

McNamara's Solution

On June 16, 1962, Secretary of Defense McNamara unveiled the answer in a speech at Ann Arbor—a speech which was reportedly a watered-down version of what he had said the previous month to the NATO Council in Athens. The plan was a refinement, long advocated by academic strategists, of the old counter-force theory:

"The US has come to the conclusion that to the extent feasible, basic military strategy in a possible general nuclear war should be approached in much the same way that more conventional military operations have been regarded in the past. That is to say, principal military objectives, in the event of a nuclear war stemming from a major attack on the alliance, should be the destruction of the enemy's military forces, not of his civilian population.

The very strength and nature of the alliance forces

make it possible for us to retain, even in the face of a massive surprise attack, sufficient reserve striking power to destroy an enemy society if driven to it. In other words, we are giving a possible opponent the strongest imaginable incentive to refrain from striking our own cities."

With this strategy, as McNamara explained, thermo-nuclear war could bring grave damage, but we would be able to "preserve the fabric of our societies." Although he did not specifically say so, one meaning of this is that Berlin could be defended without completely annihilating America. (Whether it could be defended without itself being destroyed was another question.)

The other major military problem bothering the Administration was how to halt the spread of nuclear weapons among European (and eventually non-European) countries. We had to convince our allies that our nuclear force would deter Soviet nuclear attacks on them as well—that we would regard "an attack on Paris as an attack on Chicago," and would respond with our strategic forces even though this would presumably bring destruction to hitherto intact Chicago.

An early effort to allay their fears and to forestall independent nuclear forces was the offer at Ottawa in May, 1961, of "a NATO seaborne missile force which would be truly multilateral in ownership and control, if this should be desired by and found feasible by our allies. . . ." But truly multilateral ownership and control is still nowhere within sight. Most countries want their own finger on the trigger; most also want their own thumb on the safety catch to prevent others' pulling the trigger. The US assignment of five Polaris submarines to NATO at the May, 1962, Athens meeting was therefore seen only as a token step since these vessels remain manned and commanded by Americans.

To further improve the "credibility" of US nuclear pledges, the "no-cities" doctrine, which suggested that the US could use its nuclear strength to defend Europe without committing suicide, seemed ideal. Not only did it make US forces more useful in defending Europe, but it made European forces seem positively dangerous. In the June 16 speech Secretary McNamara said that "relatively weak national nuclear forces with enemy cities as their targets are not likely to be sufficient to perform even the function of deterrence. . . . Indeed, if a major antagonist came to believe there was a substantial likelihood of it being used independently, this force would be inviting a preemptive first strike against it. . . . We are convinced that a general nuclear war target system is indivisible, and if, despite all our efforts, nuclear war should occur, our best hope lies in conducting a centrally controlled campaign against all of the enemy's vital nuclear capabilities, while retaining reserve forces, all centrally controlled."

But the British (whom McNamara quickly exempted

from his strictures) and French are not to be so easily dissuaded from their drive for independent nuclear forces. This is in part because their goals are as much related to prestige and political influence within NATO as they are to security, and in part because they did not think much of the reasoning behind McNamara's new strategic doctrine.

The No-Cities Panacea

The "no-cities" plan is, in a sense, an extension of the theory of limited nuclear warfare. It is widely agreed today that fighting in Western Europe with so-called tactical nuclear weapons would be extremely unlikely to remain limited. Bombing which began at or near a battle line would rapidly thrust into the Soviet and Western European homelands as each side tried to catch the other's troop reinforcements as they were being moved forward to replace those lost, and as each side used airfields farther and farther back from the battle line after those close to the front were destroyed. There are, in short, few natural geographical barriers to help keep nuclear war limited in Europe.

The new Administration apparently had little faith in geographic limitations, but it is still trying to put limits on targets and weapons. In a no-cities war the Soviet Union and the United States would, however, have to be able to distinguish, with their missiles, between the bases and the cities of the opponent. Admiral Burke, who didn't think much of this idea, told the Senate Armed Services Committee in April, 1961:

"Yes, sir. Many of these missile bases are right close to our cities, right close, so are many of our other bases. So an attack on our major bases would necessarily destroy a great many cities and a great many of our people. When those missiles start coming over you do not know whether the intent of the enemy was to hit or not to hit a city if he hits it. The same thing is true with the Russian military installations."

No-city proponents argue that none of the largest cities are near missile bases, and that we might be able to move some of the military bases away from smaller cities. But a problem still remains: how major civilian airports can be destroyed without hitting their "attached" cities. These airports are considered military targets because bombers can be dispersed to them and can re-fuel and maybe even re-load bombs for another flight from them. And major US and Soviet cities are also ringed with anti-aircraft missiles which the opponent must hit with his missiles before sending in his bombers. These anti-aircraft installations should be destroyed in the first counter-force strike, for if the enemy strikes back against your missiles you may not

have enough left to destroy his anti-aircraft. In that event most of your bombers will be shot down, and most of the advantage of striking first will be lost.

But if either anti-aircraft missiles or civilian airports are destroyed with standard missiles in the megaton range, tremendous destruction will occur in the nearby cities. The only alternative is for each side to build hundreds of expensive invulnerable missiles and load them with "low" (10-20 kiloton?) yield bombs suitable for destroying small targets with a minimum of side damage (while also building missiles with huge warheads to destroy hardened weapons.) Nobody has built such small weapons. Will they do so?

In order to keep the war limited each side must also be willing to settle for less than total victory - for a compromise. (Given both personal and national biases, it is probable that to reach a settlement each country would actually have to settle for what it regarded as a defeat.) It might be asked why, if we are unwilling to settle for a draw in the arms race now, we are more likely to settle for one during a war? Does nuclear war make men more rational and restrained? Most Americans seem to feel that the cold war is a battle of virtue vs evil. Will their government compromise with evil during a war? We didn't in World Wars I and II, which were fought as crusades, and we almost didn't in Korea.

A US counter-force first-strike capability is most strongly advocated by those who think it is going to enable the US to "win" a nuclear war, or at least to "prevail" in one. Said General Frederic Smith, then Air Force Vice Chief of Staff: "Ours must be a war-fighting posture, based upon the strategic force capabilities which provide confidence in a war-winning strategy. . . . our strategic concept . . . requires a war-waging capability - our primary goal is to deter war; but, if deterrence fails, we must have the capability to fight and to prevail." Will General Smith and his colleagues be trying desperately to carry out a national policy of slow-down, of target and weapons limitation, of compromise and stalemate in a nuclear war?

Communication is another problem. Aside from the tremendous difficulty of maintaining foolproof command and control over all Western forces, there is the problem of talking to Khrushchev - or his successor. As Jerome Wiesner has written: "In conflict situations . . . statements of antagonists are evaluated not in terms of the intended meanings, but rather in terms of the most threatening alternatives. This is particularly true when survival is believed to be at stake." Would it be possible, for example, for either the Premier or the President, talking through static and interpreters, to convince the other that his suggestion of a 48 hour cease-fire was anything more than a ruse to gain time for bomber refueling, reloading and repair? Or for

missile re-mounting, if this becomes possible? In earlier wars it was possible to pause for negotiation without giving up any vital position. Today, when time and information are among each side's most valuable counters, this will be harder.

Still another difficulty with the "no cities" strategy is that decisions on which missiles to fire at which targets, which bombers to send, which to hold back, which missiles to retarget because others have been destroyed — all will have to be made with split-second timing by the President (or his successor if he is killed) and the Air Force and Navy Officers under him. As Secretary McNamara said on February 17, 1962: "Our new policy gives us the flexibility to choose among several operational plans, but does not require that we make any advance commitment with respect to doctrine or targets. We shall be committed only to a system that gives us the ability to use our forces in a controlled and deliberate way." Earlier he had told a Congressional Committee that even the decision whether to retaliate against Soviet bases or cities would be "a question of operational plans to be decided under the circumstances at the time."

This idea of "controlled response" is the most fundamental part of the new strategy as seen by Kennedy and McNamara, both of whom naturally want to retain maximum last minute freedom of choice. But how realistic is it? Even given the best intentions, and an absolutely flawless communications systems, is it safe to assume that the human beings in charge at each level of command will operate in a cool, rational way in crisis situations of high emotion and extremely rapid decision making? No doubt some men will operate this way. But who will doubt that some will not? It only takes a handful to undermine the whole strategy and unleash an all-out city-busting war.

Will the Soviets "Play Ball"?

Even if we refrain from hitting Soviet cities, will they refrain from hitting ours? The adoption of a no-city doctrine is only attractive to a nation which has a well-developed counter-force weapons system. Such a system requires several missiles for every enemy missile, i.e., overwhelming nuclear superiority. It is clearly impossible for both the US and USSR to have such superiority. So long as the USSR remains weaker than the US, it is unlikely to adopt a no-city strategy. Suppose, for example, that the Soviets have 100 missiles and we have 200. If they launch 75 of these missiles against ours, and are highly successful, they might destroy 50 of ours. We would then have 150 left and they would have 25. Our advantage would have risen from 2:1 to 6:1. This is hardly an improvement from the Soviet viewpoint, and certainly not an objective for

SUMMER SCHEDULE

*During the summer months,
The New Republic will not appear on:*

August 6

August 20 September 3

*Weekly publication will be resumed with
the issue dated September 10*

which they would initiate thermonuclear war. If they should ever be mad enough to attack they would more likely try to destroy our society rather than simply weakening themselves by exchanging missiles. Alternately, suppose that we launch 150 of our 200 missiles and destroy 90 of their 100. Will they launch the remaining 10 against our empty missile pads, or against our dispersed and air-alerted bombers? Hardly likely. They may conceivably surrender, or they may strike back against our cities, but one thing they almost certainly won't do is strike our bases.

Secretary McNamara himself is a recent convert to the doctrine of no-cities. On August 1, 1961, he told the Subcommittee of the House Committee on Government Operations that was studying the Administration's Civil Defense requests that "I think that in order to avoid confusing the planning on the local level it would be wise to pick an attack that is both most likely, and also the largest — and I believe that the largest is the most likely — and base the local planning on that assumption. . . ." On November 17, at a press conference, he was more explicit: "I think it is at least as likely that our cities would be attacked as that our military targets would be attacked. I don't share the views of some that only the military installations would be targeted." And as recently as February 2, 1962, he made the following response before the House Defense Appropriations Subcommittee:

Mr. Minshall (R, Ohio): "Can you imagine any situation where the Soviets would attempt to spare our cities?"

Secretary McNamara: "I can imagine such a situation, yes. I am not suggesting that I think it highly probable . . ."

One cannot avoid noticing how marvelously the timing of Mr. McNamara's conversion to the no-cities doctrine coincided with the NATO meetings, at which

it was very convenient for him to argue that US nuclear threats did not necessarily depend on US readiness to commit national suicide.

A final unpleasant question about the no-cities doctrine: suppose we do get into general nuclear war and the strategy works — cities *are* spared. How many people would nonetheless die? On this question Assistant Secretary of Defense Stuart Pittman presented charts showing official estimates to the House Independent Offices Appropriations Subcommittee hearings on March 13 of this year.

These charts show that in a pure counter-force, no-cities attack, the Defense Department expects to lose (reading roughly from a poorly marked graph) between 30 and 150 million people, depending on the size of the attack. This assumes no civil defense program. With 235 million totally adequate fallout shelter spaces the Defense Department expects that US casualties in a no-cities war could be held to between 4 and 27 million. Such shelter could not, however, be available before 1967, even if things go as smoothly as Mr. Pittman hopes — which seems, to put it mildly, improbable (and for various reasons, undesirable). Further, even the top figure of 27 million is based on a number of extremely optimistic assumptions, (e.g., that everyone will go to the shelter to which he is assigned, even through it is not the closest to his home). And, since a no-cities policy looks to the Soviets like a first-strike policy, it will presumably encourage them to accelerate their formerly slow pace of missile building (judged by the fact that they built only 3.5 percent of what official intelligence believed they could and would build from 1958 to 1961). All this means that the larger figures are the more probable, and even these may well be low.

And what if no-cities war "slips" into a counter-force plus counter-city war, as seems very likely? The Defense Department predicts 83 to 175 million US dead. Or after the five year perfect fallout shelter programs, 50-130 million (assuming a population then of 200 million). While Administration witnesses like to emphasize the many millions of people that could be saved by fighting no-city war, it must not be forgotten that scores of millions will die in *any* nuclear war.

No Cities: A Harmless Panacea?

In summary, the no-cities doctrine might be likened to a patent medicine: Harmless, and possibly even somewhat helpful, if taken in small doses, so long as misplaced faith in its beneficial effects does not inhibit serious efforts to find a real cure. Harmless, and possibly helpful, that is, except that it is inextricably linked, no matter what Mr. McNamara may say, to a counter-force first strike strategy. To talk about a "no-city" second strike is realistic only if the Soviets are able to

launch a no-city first strike. So long as they remain weaker than the US they will not contemplate such a strike. And weaker than the US is just what the Administration wants the Soviets to be for the foreseeable future.

At present we have 82 ICBM's, to a reported Soviet 50-75; we have over 600 B-52's and nearly 100 B-58's, to the Soviets' estimated 400 to 800 one-way-only me-have around 900 aging medium bombers with highly developed refueling capabilities for round-trip strikes, to the Soviets' estimated 400 to 800 one-way-only medium bombers; we have 128 Polaris missiles on 8 submarines, and the Soviets are estimated to have "a few" submarines capable of firing missiles after surfacing. In addition we have 1000-2000 carrier- and overseas-based fighter-bombers capable of carrying nuclear weapons to the Soviet Union, and around 100 IRBM's based in Europe aimed at the Soviet Union (useful, incidentally, only for a US first strike). The Soviets are said to have several hundred IRBM's capable of reaching Europe but not the US. The British have something like 150 bombers with nuclear weapons.

We are building and installing missiles so fast that by the end of 1962 we will have not 82 but 180 land-based missiles. In 1963 this number is to triple and our Polaris submarines will double. By 1965, Deputy Secretary of Defense Gilpatric said on May 2, 1962, "We will have 950 bombers [most of the old B-47's will be retired] carrying, we hope, 800 air-to-surface missiles including Skybolts as well as Hound Dogs. We will have some 1500 ICBM's operational, including Atlases, Titans, Minutemen and Polaris. *We will have twice the striking power by 1965 that we have at the end of fiscal '62. That is why we feel that no matter what the Soviets can do, based on the intelligence we have today, that we will maintain the margin of superiority that we possess today.*" (Italics added.)

But as the absolute number of missiles increases, merely maintaining our present margin of superiority will not be good enough. To illustrate with an arbitrary example: Let us assume it takes only two of our missiles, given a certain yield, accuracy, and Soviet base hardness, to have a 90 percent chance of destroying one of theirs on the ground. Then if we have 200 missiles and they have 100, we could conceivably strike first expecting only 10 of their 100 missiles to survive and retaliate against us. Maybe some consider this a "credible" threat on our part. But now look at 1965, when we expect to have about 1,000 missiles suitable for counter-force. Suppose the Soviets have 500 missiles. Our missiles are by then bigger and more accurate than today, but theirs, in turn, are more hardened. Assume that as a result we still have a 90 percent chance of destroying one of their missiles with two of ours. We strike first, perhaps to honor obligations in Europe.

The result? The Soviet Union has not just 10, but 50 missiles left to retaliate with. To hold them to only 10 missiles, their 1962 level, we would need not just 1000 missiles but 1500 to their 500 — not twice, but three times their total. If they should build 1000 hardened missiles, we would need nearly four times as many as that to be able to strike first and knock out all but 10. And even if we can do this, is our threat to strike first believable if, as seems possible, these 10 missiles have 100 megaton warheads. Or suppose they build a few dozen missile-carrying submarines. Then is our threat to strike first credible even if we have tens of thousands of missiles? The fact is that our first strike capability can remain effective for only a very few years more (assuming that it is still today) — unless, of course, you assume that the Soviets, having absorbed a “no-cities” strike that leaves millions of Russians dead, will be more interested in saving what is left of Russia than in destroying America, and will therefore hit a few US bases and negotiate a peace treaty.

The Cost of a First-Strike Capability

We will pay a high price for counter-force capability. For one thing, if war should break out in 5, 10 or 15 years, the total megatonnage available will be vastly greater because of the intervening arms race. The race will be especially accelerated if either side starts building mass fall-out shelters and the other decides to lay in a stock of especially powerful or dirty bombs to offset the shelters (“just in case”). But even without shelters, delivery vehicles for tens of thousands of megatons are quite conceivable on each side within a few years. Of course only a small fraction of these will be aimed at civilians — if the no-city strategy is actually followed when war comes. But if it isn't, the result will be an even greater catastrophe for both sides (and conceivably even for the rest of the northern hemisphere) than if both sides had limited themselves to building finite deterrence forces.

A second major cost of the counter-force first strike strategy is that it leads us directly away from arms limitation and eventual disarmament.

a. It accelerates the arms race and expands it into new areas of science and technology.

b. By making the major powers fear surprise nuclear attack, it increases the mutual fear, suspicion, distrust and hatred which is already today a major roadblock to any form of arms limitation.

c. It reinforces and even legitimizes the Soviet tendency to paranoia on the question of secrecy. If the Soviets can really keep some of their base locations secret, as they apparently hope to do, a highly successful US counter-force first strike will be impossible. If they allow disarmament inspectors to go about the

country, as we insist, a US first strike may be made more feasible in a crisis.

d. The US advantage in numbers of missiles required for Mr. McNamara's policy makes it more dangerous for the Soviets to cut fixed numbers, or even fixed percentages, from their nuclear forces. The 30 percent cut in nuclear forces which the US has proposed at Geneva would make a US first strike easier, not harder (for the same reasons, explained above, that a 30 percent increase in forces on both sides would make a US first strike harder).

Finally, a first strike counter-force strategy may well cause a general nuclear war. It encourages the spread of nuclear weapons to more and more countries, eager to gain some protection against a Soviet or an American first strike, or to gain bargaining power in a world where nuclear weapons are the main chips; it makes the use of strategic weapons as deterrents to limited attacks more plausible and hence more probable; it helps perpetuate the myths that the US can win or prevail in a nuclear war, that we are omnipotent and can shape the world as we want to see it, and that we don't have to negotiate or compromise on issues of great importance to us; it obstructs movement toward disarmament or even significant arms control; and finally, by making a US first-strike seem possible to the Soviets it increases the chances of a preemptive Soviet strike, especially during any limited war. In other words, the counter-force strategy encourages the Soviets to assume that if they don't go first, the US will, and that they had better pre-empt in order to get the advantage of launching their forces intact.

A major drive behind the counter-force strategy is the belief that pure deterrence of all-out war is not enough, that such a war is likely to come, and that we must be prepared with a defense strategy which will allow us to fight it and if possible win it. But in the nuclear age the best weapons systems and strategies for successfully fighting and winning a war are not the best ones for preventing that war. The more we prepare to try to win a war, instead of to forestall it, the more likely we are to have to fight it.

Many high officials within the Administration recognize that in the long run, Mr. McNamara's strategy would lead away from disarmament and toward nuclear war. But in the short run, they say, we need it to provide increased bargaining power *vis-à-vis* the Soviet Union on Berlin and other matters. Giving up our first-strike potential therefore depends on finding some other way to preserve the freedom of Berlin. Surely this is not an insoluble problem. The West can more than match the Soviets in non-nuclear forces, in political ingenuity and appeal, and in economic power. Our nuclear weapons should be limited to their only rational purpose: preventing the Soviets from using theirs.

McNAMARA'S STRATEGY - II | *When on June 16 Secretary of Defense McNamara set forth at Ann Arbor the rationale for "city sparing" in a nuclear war, he precipitated a national controversy concerning not only the merits of his new strategy but precisely what it was that he had committed the United States to uphold. In the July 30 issue of The New Republic, Michael Brower contended that the McNamara proposal was "inextricably linked... to a counterforce first strike strategy" advocated within the Air Force. Robert E. Osgood, Research Associate at the Washington Center of Foreign Policy Research and a professor at the Johns Hopkins School of Advanced International Studies, argues that "a counterforce capability may be for a retaliatory strike and the counterforce requirements for a first and retaliatory strike are different." Favoring retaliatory counterforce, he still fears that the McNamara nuclear strategy may become "a substitute for conventional resistance," with "disastrous" results. Mr. Osgood is the author of Limited War and NATO: The Entangling Alliance.*

Nuclear Arms: Uses and Limits

by Robert E. Osgood

The dilemma of modern armaments is that the will to use nuclear weapons is indispensable as a deterrent to nuclear and perhaps major conventional aggression; yet if the US were to exercise its will and use anything like its full arsenal of nuclear weapons it would destroy the very things it was fighting to save. The Eisenhower Administration simply accepted this dilemma and relied upon the horror of nuclear warfare to deter the Russians from making a theoretical conundrum into a practical problem. Eisenhower increased the West's dependence upon America's nuclear weapons while conceding that a nuclear war would be "self-defeating." The Kennedy Administration, on the other hand, has been unwilling to accept the nuclear dilemma. It believes that a threat which would be self-defeating if carried out makes an inadequate deterrent, incompatible with the cohesion and bargaining power of NATO, and worse than useless if deterrence fails.

The new Administration's first attempt to overcome the nuclear dilemma was to increase the free world's capacity for non-nuclear resistance: to provide "a wider choice than humiliation or all-out nuclear action." But despite some strengthening of America's conventional capabilities the NATO allies have done little - most of them nothing - to increase their conventional capabilities in Europe. They have either opposed or acquiesced unenthusiastically in America's strategy of "flexible response." Hence it remains doubtful that NATO's conventional forces could contain large-scale Soviet conventional aggression in Europe.

Stuck with inadequate conventional capabilities in the face of Soviet brinkmanship in Berlin, the Kennedy Administration has engaged in the difficult task of simultaneously restating America's determination to use nuclear weapons if necessary and trying to persuade the allies to increase their conventional capabilities so that this will be unnecessary.

This predicament has given added impetus to the Administration's other major military innovation, intended to overcome its inherited nuclear dilemma: the strategic counterforce or "no-cities" strategy that McNamara outlined publicly at Ann Arbor in June and privately, in more detail, to the NATO ministers at Athens in May. The US, according to this strategy, would strike at those Soviet missiles and bombers which could strike major American and European targets, while holding in reserve enough relatively invulnerable missiles to devastate Soviet cities. This would, perhaps, dissuade the Russians from engaging in a mutually suicidal exchange of cities.

Clearly, this strategy of "controlled response" requires a drastic change in the nuclear plans of the Eisenhower Administration, which called for striking a vast array of civil and military targets in a kind of automatic spasm of devastation. The architects of the new strategy are convinced it is the only one which provides any chance of permitting a favorable resolution to a nuclear war. None of them claims that the civilian destruction would be anything but terrible; but, as opposed to either a strategy of indiscriminating

military and civil destruction or a strategy of "finite deterrence" designed only to strike at cities, they contend that this counterforce strategy might save tens of millions of American lives and comparable proportions of European and Russian lives. This would render nuclear war a more rational, less apocalyptic recourse.

The timing and method of announcing the no-cities strategy were prompted partly by the Administration's desire to discourage the French from pursuing the development of an independent nuclear force. And as Michael Brower suggests (*The New Republic*, July 30), the Administration also wanted to bolster allied confidence in (and Russian respect for) America's determination to use nuclear weapons rather than countenance defeat in a major European conventional conflict. But the basic motive for developing the strategy lies in President Kennedy's desire to have a rational option if a nuclear war must be fought for *any* reason, including some technical accident, human mistake, or a Soviet first-strike launched out of miscalculation or irrational impulse.

Like most other strategic innovations, this one is also derived from technological developments. Recent advances in the Soviet capacity to destroy American cities have made it clearer than ever that all-out massive retaliation is a two-way street. At the same time, the achievement of a relatively invulnerable nuclear force has made it possible to conceive of holding a countercity force in reserve while using other nuclear weapons, greatly improved in accuracy and reliability, with restraint and political discrimination. Finally, the Kennedy Administration discovered that not only was there no "missile gap" but in fact the US strategic force would, at least through 1967, be so superior to the Soviet force as to be capable of absorbing a nuclear attack and still destroying most of the Soviets' remaining striking power.

A Moral, Political and Military Imperative

As long as nuclear weapons (and hence the chance of nuclear war) exist, I cannot see the objection to taking measures that might enable both sides to keep a war under political control and insofar as possible spare cities. On the contrary, I consider it morally, politically, and militarily imperative not to forfeit even the slightest opportunity to achieve this objective. Nevertheless, the official description of the no-cities strategy leaves me with some anxious questions and doubts about *when* and *how* we ought to plan on fighting such a war.

Unfortunately, however, what seem to me to be valid questions and doubts are likely to get confused with some invalid ones. Some people oppose any effort to make warfare less destructive – on the supposition that only so long as war appears to be inevitably self-

defeating have we any hope for peace. Other more sophisticated critics argue, as Brower does, that the new counterforce strategy unstabilizes the military equilibrium because it encourages a Soviet preemptive attack. This argument, aside from exaggerating the willingness of one state to launch a preemptive nuclear attack without the most material evidence of enemy intentions to strike first, seems to me to overlook the fact that the US could virtually destroy the USSR even after a preemptive Soviet attack. Thus even if the Soviets are convinced the US is about to strike, their best hope for survival is in the possibility they are wrong rather than in the possibility of weakening our strike by going first.

Brower and others also mistakenly identify a counterforce capability with a first strike strategy, overlooking the fact that a counterforce capability may be intended for a retaliatory strike and that the counterforce requirements for a first and retaliatory strike are different. In contending that a retaliatory counterforce strike is (or soon will be) useless, they ignore the probability that for technical and economic reasons significant numbers of Soviet weapons, including those on missile bases with reload capacity, will remain vulnerable to detection and destruction.

Finally, there are those who oppose *any* counterforce capability because it holds open the possibility that under extreme provocation the US might initiate the use of nuclear weapons. These individuals do not appreciate the difficulty of distinguishing counterforce from countercity capabilities. More important, they rarely spell out what they think the US should (or would) do in the event that NATO forces prove incapable of containing a conventional European conflict. They argue for strengthening NATO's conventional capability over the next few years without saying what the US should do in the interim.

To me the most legitimate question raised about the McNamara speech by its critics is whether the Administration plans to rely heavily on this new nuclear strategy as a substitute for conventional resistance – as a kind of tidied-up version of massive retaliation. If so, the political if not the military results will indeed be disastrous, for not even the most carefully planned controls will purge nuclear war of its unique fearsomeness or relieve the alliance of the liabilities of depending on nuclear weapons as the chief backstop for diplomacy. The most optimistic estimates of civil destruction indicate that a counterforce war with Russia, although less catastrophic than a countercity war, would be unconscionably devastating even if both sides meticulously observed the rules. Therefore, insofar as the Administration's counterforce strategy is intended to support a first-strike strategy, it will suffer – as a deterrent and as an instrument of policy – much the same liabilities as the old massive-retaliation strategy. Con-

sidering the Soviet predilection – at least in the past – for keeping its incursions well below the threshold of provocation that would confront the West with a clear-cut choice between humiliation and nuclear war, it is hard to believe that a counterforce strategy will make a substantial difference in the deterrence of hot war or the fortunes of cold war.

Nuclear versus Conventional Build-ups

The point is worth making because some of the military, even though they were originally advocates of all-out, cities-plus-counterforce retaliation, will acclaim the new strategy, in the words of the July issue of *Air Force*, not as a switch but as “an endorsement of the Air Force’s doctrine of counterforce capability” – as a vindication of a first-strike win-the-war strategy and a powerful instrument of coercion against Khrushchev. And some European officials, anxious for any excuse to avoid building up conventional capabilities, may come to welcome the new strategy as a more plausible and respectable version of massive retaliation.

If the Administration wishes to avoid this interpretation – and I believe it does – it must evidently clarify its intentions. One should not expect it to renounce the option of initiating the use of nuclear weapons as long as NATO cannot be confident of handling a conventional assault conventionally. Consequently, it must apply the new strategy to the first-use as well as to the retaliatory-use of nuclear weapons. Yet, considering the pressures here and in Europe to regard nuclear deterrence as a substitute for a conventional buildup, the government must continually emphasize – as McNamara, with no help from the press, tried to do in his Ann Arbor speech – that NATO urgently needs to build the kind of capabilities that will enable it to reduce (I would say abolish) its dependence on a first-strike strategy. For, in my view, the only persuasive argument for the new counterforce strategy is that if nuclear weapons are used, either initially or in response to a Soviet nuclear attack, it may provide an indispensable opportunity to fight and conclude a nuclear war with the fabric of governments and societies intact. It should not effect the decision *when* to use nuclear weapons but only *how* to use them.

Even on the latter question – *how* to use nuclear weapons – the feasibility of the strategy McNamara outlined is open to question. Because of the immense destructive potential involved and the terrible uncertainties about how weapons and especially people will perform in a completely unprecedented extremity, there must be serious doubts about the chances of limiting a strategic counterforce war. Even assuming that they are determined to try, will both sides be able to find and hit bombers and missiles with sufficient precision (*i.e.*

sufficiently slight collateral damage to cities) to maintain the limiting conditions of a counterforce war? Will they deliver the least destructive and most accurate explosions needed for the target or will they use a surplus of destruction – ground bursts, super-megaton explosions, and saturation attacks – in order to be surer of eliminating counterforce targets? If one power fears that it is being disarmed or that its material, social, and political fabric is in jeopardy while the enemy’s is not, will it surrender? Or will it try countercity exchanges to get a more favorable settlement and postwar situation? Suppose that we were to succeed in virtually eliminating the Soviet counterforce capability but that the Russians controlled part of Western Europe, retained their countercity reserve, and declined to surrender. What would we do then?

These are only a few of the questions one should worry about. To maximize the feasibility of fighting a strategic counterforce war rather than a countercity war, we must move missile and bomber bases in the US, and so far as possible in Europe, farther away from cities. It is also imperative to get the nuclear weapons assigned to the Supreme Commander of NATO forces in Europe under something like the central command and control system that has been applied to America’s strategic weapons. Under Eisenhower and Norstad, NATO forces on the Continent became increasingly dependent on a variety of nuclear weapons controlled at the divisional level. This trend must be reversed, as the present Administration seems to realize.

Equally important, the concept of employing nuclear weapons as instruments of policy must be clarified. Some proponents of a counterforce strategy now advocate “winning” a nuclear war by disarming the enemy in an all-out attack on his strategic nuclear weapons. Even if that were technically possible (and if it is now, it probably will not be in several years), any all-out effort with nuclear weapons – strategic counterforce, countercity, or tactical – is likely to be incompatible with a useful limitation of the war. The prerequisite of limiting and controlling a nuclear war is that both sides seek to end it long before either has exhausted its full capacity for destruction.

This means that the end of a strategic counterforce war must come well before one or the other side is disarmed. It means that the object of fighting must be to bargain for a mutually acceptable truce or political settlement, not to overwhelm the enemy’s military forces. When McNamara said at Ann Arbor that the basic strategy in a general nuclear war should be the same as in conventional wars of the past (“that is to say, principal military objectives . . . should be the destruction of the enemy’s military forces”), he seemed to support a conception of war that caused immense destruction even in World War I and could today make

a mockery of the "controlled response." Perhaps there are circumstances in which a nuclear war could not be stopped before the enemy's weapons were substantially destroyed, especially if the US rather than the USSR initiates the use of these weapons after a deliberate Soviet conventional attack in Europe. But in other circumstances, especially if war begins unintentionally, both sides must be willing and even anxious to halt nuclear hostilities without carrying the counterforce duel to the point of exhaustion.

But if the objective of a nuclear war is to couple measured blows with political bargaining in order to negotiate a quick end of hostilities, one wonders if sufficient official attention has been given to two possible alternatives, or possibly complements, to a strategic counterforce war: local tactical nuclear strikes and limited nuclear reprisals upon cities or other valuable civil targets. I think there are decisive objections to the latter alternative but it would still be a better last resort than an all-out attack on enemy cities. The Administration seems to have concluded that a tactical nuclear war in Europe would be so difficult to keep under effective central command and control, so susceptible to rapid escalation, and so devastating for the NATO ally whose territory was the battlefield, that limited strategic warfare would be a far more advantageous means of bargaining. Perhaps so, but if this view is correct we had better eliminate all the so-called battlefield nuclear weapons in Europe — the Davy Crocketts, Honest Johns, Sergeants, and Pershings — as quickly as allied sensitivities will permit. Otherwise we may not have a chance to employ our preferred response — controlled strategic counterforce war.

Who Will Decide What in NATO?

Finally, one must question the implications of the Administration's new strategy for America's relations with her NATO allies. McNamara's Ann Arbor speech in June and his Athens presentation in May were intended first to reassure our allies that the United States will destroy the Soviet nuclear weapons aimed at Western Europe as well as at the United States and second, to dissuade them (especially France) from trying to rely upon their own nuclear weapons — which he said would be "dangerous, expensive, prone to obsolescence, and lacking in credibility" — instead of on ours. Allied governments, when they have reconciled themselves to the passing of the Norstad regime and have adjusted to the new concept, may indeed be reassured by America's counterforce capabilities and her confidence in them, if only because they think it will make an American first-strike more credible and relieve them of the necessity of increasing their conventional capabilities. But they are not all likely to be persuaded by McNamara's mili-

tary logic that they should be content indefinitely with America's virtual monopoly of nuclear ownership and decision-making in the alliance. Militarily this monopoly makes sense; but it requires strong, self-assertive nations to leave a life-and-death decision entirely in the hands of the US, and that is likely to make less and less political sense.

The logical alternative to several independently-controlled nuclear forces in the alliance is some form of multilateral control. Yet it seems extremely unlikely that the allies can agree upon any workable method of sharing the crucial political decision to use nuclear weapons. In the absence of such a method the US has wisely declined to surrender its exclusive political control of American nuclear warheads or to encourage the development of other nuclear forces. Probably the best the US can do to discourage nuclear separatism in the alliance is to share the strategic planning process more broadly and induce those allies with independent nuclear forces to coordinate their weapons systems and battle plans with those of the US.

But here the new counterforce strategy encounters what seems like an insurmountable contradiction between its requirements of military centralization and the realities of political decentralization in the alliance. If such a strategy is to work the target system must, as McNamara said, be "indivisible" and the weapons must be "centrally controlled." Moreover, if we hope to fight a war of "controlled response," the selection of targets and the use of weapons must be under a unified, flexible and secure organization, with an elaborate set of procedures and equipment for gathering and assessing wartime intelligence and for making, communicating, and executing top-level decisions under unprecedented stress.

Central control in this sense is clearly incompatible with any real independence of choice by more than one government (or supranational organ) in the use of weapons. Even the existing system of America's releasing warheads to allied units during nuclear combat might undermine a controlled response if allied governments exercised independent judgment in using the warheads. Yet if the allies take the new strategy of controlled response seriously, they can hardly fail to realize that the selection of targets and the choice of weapons in a nuclear war involve the most vital kind of political decision, which they cannot readily abnegate. Consequently, to the extent the allies accept the new strategy they are likely to become more rather than less dissatisfied with America's monopoly.

Like other aspects of the nuclear dilemma, this is not an argument for a strategy of unlimited civil destruction. It is, above all, an argument for reducing to the absolute minimum the dependence of allied security upon nuclear weapons.

THE NEW REPUBLIC

A Journal of Opinion Volume 146 Number 17 Issue 2477 April 23, 1962
Published weekly (except for omissions of four summer issues) and distributed by The New Republic, 1244 19th St., N.W., Washington 6, D. C. Phone: FEderal 8-2494. Single copy 25c. Yearly subscription, \$8.00; Foreign, \$9.00, Armed Forces personnel or students, \$5.00. Advertising rates upon request. Subscribers desiring change of address should notify us at least three weeks in advance. Include old and new address. Copyright© 1962, by Harrison-Blaine, Inc. Item g. Second class Imprint, reading Second Class Postage Paid at Washington, D. C. Indexed in Readers' Guide to Periodical Literature.

The Fear of Cheaters

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By April 25 the US is scheduled to recommence the testing of nuclear weapons over the Pacific Ocean. A new Soviet series is also said to be imminent. By rejecting even the minimal procedures for international inspection sought in US test ban proposals at Geneva, the Soviet Union had given the President provocation for his decision to go ahead at Christmas Island; but it does not necessarily follow that the US should have permitted itself to be provoked, or that the US rather than the Russian military has the most to gain from the new round of testing. The nagging question is why the Russians were so very anxious to avoid a test ban. As Max Frankel has reported in *The New York Times*, the answer now prevailing in Washington is that "Moscow wants the West to test so that it may have a convenient pretext for going on with experiments [of its own] . . . that would finally put the Russians technologically ahead."

Three weeks ago, we noted that in refusing to sign a test treaty without international inspection, our government appeared to be doing precisely what the Russians wanted, and suggested that the security advantages of "international" over "national" inspection had been exaggerated. We are prepared to go farther: Reliance on our own national inspection system might offer more security than reliance on an international system, if only because, having accepted an international inspection system, we would be constrained from acting on data obtained by our own intelligence operations. This contention flies so directly in the face of the conventional wisdom and of official policy that one hesitates to assert it with certainty. Yet analysis of the test issue increasingly reinforces our belief that the ideal of international inspection of nuclear explosions has acquired a symbolic significance quite independent of its bearing on US security.

It must be understood, in the first place, that an international organization with its worldwide network of seismic and atmospheric sampling equipment and monitoring crews would no more be foolproof in detecting isolated, underground tests than our unilateral, national apparatus. The unreliability of the international system proposed by the US at Geneva was thoroughly documented in expert testimony during the 1960 hearings on test detection held by the Joint Committee on Atomic Energy. Roughly speaking, its flaws are these:

1 - US proposals do not cover tests in outer space, which can be conducted by sending out a rocket toward the sun, separating it into two parts, and sending back coded data from one part about the



"Shall We Resume Testing Human Beings?"

explosion of the other. (The Soviets have repeatedly rejected an inspection of rockets before launchings; the possibility of identifying such tests by satellites is as yet unverified.)

2 - Our proposed system would be unable to distinguish between earthquakes and underground tests which produce seismic readings of less than 4.75. This means that the Soviets could probably conduct low yield tests (those of less than 20 kilotons) without great fear of detection, and that by "decoupling" tests in large, specially constructed holes, preferably in salt or limestone, they might "muffle" even larger tests.

3 - US proposals would permit only 20 on-site inspections each year of seismic events. Since there are between 50 and 200 such events annually in the USSR, and since less than half of these can be definitely identified as earthquakes from purely seismic data, inspectors could not count on visiting an average of more than one suspicious event in three. And if the US agreed to compromise on 12 inspections a year, as our negotiators have suggested we might, the inspectors could visit the site of only one tremor in five. Nor would these visits necessarily locate a well-disguised hole, for by conducting several tests simultaneously, the "cheating" nation could create a wide margin of

doubt about where to begin looking; and in any case it is not easy to find a hole 2,500 feet underground, even if you know within a few hundred feet where to start drilling. Given a 50-50 chance of finding the hole when looking for it, the whole system would have no more than one chance in ten of identifying the site of any particular large underground test. The odds would, however, be much higher for a series of tests.

Now, compare this with the inspection scheme proposed by the USSR, in which each side relies solely on its own resources for identifying violations. For the US, this means relying on Soviet defectors, spies, reconnaissance satellites, atmospheric sampling equipment, and perhaps most important of all, on our elaborate, world-wide network of seismographic equipment. Nobody, least of all the Russians, knows exactly how good this system is now, or could be made in the near future. It was good enough to identify an underground Soviet test of less than 20 kilotons last winter. It might not, however, have identified such a test in a different part of Russia, in a different kind of hole or in a different kind of rock. Indeed, the Soviet test might have been much larger - perhaps as large as a megaton - without being identified. Seismology is not a very highly perfected science. Yet for this very reason, the Soviets almost certainly could not have known in advance whether their muffling precautions were adequate to make the West mistake the test for an earthquake. Nor can they be sure they would get away with "cheating" in the future. Not even Western scientists, who appear to have studied these problems more thoroughly than the Russians, can be sure *after* a Western test whether the Soviets have identified it or not.

Even if, as most Americans suppose, an international inspection system is more likely to discourage Soviet secret tests than our own national inspection, it is necessary to ask how much more likely. The proposed international system would have a fair chance of distinguishing a nuclear test of more than 20 kilotons from an earthquake, whereas the ability of the US seismic system to make this same distinction may be restricted, at least for the present, to tests above one megaton. However, this would only become important if the Administration were to demonstrate that it is more dangerous to US security for the Soviets to be able to conduct undetected underground tests up to a megaton than underground tests up to 20 kilotons. This claim has, however, never been made officially, and most non-government experts deny that it could be supported. Any advance in nuclear technology which could be made by underground tests of less than a megaton could almost certainly be accomplished eventually by tests below 20 kilotons.

Potentially dangerous Soviet underground experiments fall into three categories: "proof" testing of

tactical nuclear warheads, experiments to improve weight-to-yield ratios, and experiments designed to see whether atmospheric tests (particularly of anti-missile systems) are likely to be worth the bad publicity they would bring. Although the AEC and Pentagon made much of tactical warheads and weight-to-yield improvements in 1958-60, the importance of these has since diminished. Limited nuclear war is no longer regarded as either probable or profitable for either side, so that the question of having one kind of warhead rather than another is less urgent. And the Soviets' tests last fall brought them near the theoretical limit of weight-to-yield increases, a point which the US reached some years ago. The White House therefore takes the view that the main danger from secret underground tests would be that the Soviets might learn something to make them believe that an effective anti-missile system was possible. If the Soviets then tested their experimental anti-missile program in the atmosphere during an international crisis, and if the atmospheric tests were successful, they might be in a position to launch a nuclear first strike before the United States was even ready to begin work on its own system, much less test it. This may conceivably be a real danger, especially if, as the President stated on March 2, American scientists cannot be induced to do research on such a system unless they are promised a chance to test it. But the Administration is willing to take this risk if it is allowed to build detection stations inside the USSR and conduct a handful of on-site inspections. The risk would not be appreciably increased if we relied instead on the CIA, the AEC, the Pentagon, the Coastal and Geodetic Survey and Samos satellites, and to draw the line on this issue seems to us arbitrary.

In general, what we wish to suggest is that the risks of national monitoring are not appreciably greater than the risks of international inspection, and that because the loopholes in our flexible national system are less easily pinpointed such a system may even be better than an imperfect international system.

Sophisticated advocates of the US position assert, however, that there is a big difference between CIA knowing the Soviets have tested and an international organization telling it to the world. According to this view, the principal sanction preventing Soviet tests if a treaty were signed would be Soviet reluctance to be authoritatively identified as a "cheater." Perhaps. But no such concern for world opinion was evident when the Russians resumed testing last September. It seems more realistic to assume that the Russians will calculate advantages and disadvantages of "cheating" almost entirely in terms of the probable response of major military powers, and particularly the US.

Finally, there is the matter of precedents. In the past, the US has regarded a test ban as a first step towards

FOOTNOTES to the WEEK

SECOND CLASS mail rates, about which publishers have been so jittery, will stay about where they are now. The Senate Post Office Committee will reject a one cent surcharge requested by Postmaster Day. — A CATHOLIC segregationist, threatened with excommunication for opposing desegregation of New Orleans parochial schools to begin this fall, has replied in an open letter to Archbishop Rummel: "Your Excellency evidently conjectured that I have not been obedient to the teachings and discipline of Holy Mother Church because I am fighting forced racial mixing, a non-religious, social, and political and revolutionary movement instigated and supported by the Communist Party, arch-enemy of all Christendom." — THE ROYAL LAOTIAN government has accumulated an estimated \$44 million in a London bank against the day when the Pathet Lao takes over. As part of its effort to pressure Boun Oum into joining a neutralist coalition, the US wants Britain to freeze these funds. — EVERY STATE that lost House seats as a result of the 1960 census has drawn new Congressional boundaries. In only five states which gained a seat will candidates run statewide: Maryland, Ohio, Hawaii, Texas and Michigan (where Democratic National Committeeman Neil Staebler is running for Congressman-at-large). In California, Kennedy's campaign manager in '60 and present Speaker of the legislature, Jesse Unruh, master-minded reapportionment so advantageous to his party that seven or more new Democratic Representatives are probable. — UNITED NATIONS officials think that if Premier Adoula and Katanga's Tshombe can come to terms within the next month, UN military forces in the Congo can be reduced from the present 17,200 to about 9000 by early '63. However, badly needed training of a Congolese security force has not yet started. — THE HOUSE is expected to defer consideration of US purchase of UN bonds until after the World Court decides, sometime this summer, whether under the Charter each member state is obliged to pay special assessments voted by two-thirds of the General Assembly. — NORTHEAST BRAZIL will get \$278 million for development projects under an Alliance for Progress crash program. The effort to dilute the strength of insurgent "peasant leagues" will be directed by Bruno Luzzato, highly-respected former World Bank representative in Brazil. — AN AD in The Dallas Morning News of April 1 asks whether some "wealthy, conservative Texan" would enjoy "having played a critical part in bringing to Texas our first Nobel Prize for literature." If so, he is invited to subsidize "a powerful, world-significant novel dehorning the red-nosed reindeer of the lunatic left."

arms control, and has thought that one of the main virtues of a treaty would be its small-scale demonstration of how an international disarmament organization could work. This was and is an important aim. But we should not sacrifice the possibility of a test ban in a fruitless effort to establish the precedent of international inspection.

The United States cannot get, and has not even dared propose, a really adequate international system; and that being so, there is little virtue in insisting on an inadequate international system just because it is international. If we want to halt further tests, let us end them the only way they can be ended — without international controls. An agreement that rests on national monitoring might be broken by the Soviets. But if the Soviets plan to violate the treaty they are likely to do so no matter how many inspectors there are inside the USSR, for they are likely to do so deliberately and openly in order to impress Washington with their nuclear power and "will."

Steel and the Public

After Big Steel marched up the hill and down again, two questions remained: How is steel to secure capital for modernization? And second, should the making of a price in so basic and monopolistic an industry "be freely and privately made . . ." as the President believes; or does the public interest need to be represented more formally in bargaining and in pricing decisions?

The case for a \$6 a ton price increase was that it was needed to improve earnings so that funds would be available for investment in more efficient production. This Administration has not denied the industry's need for capital accumulation. A tax bill now before the Congress would make available about \$110 million to steel through a credit on investment in new plant and equipment. But neither this measure nor Mr. Blough's defense of a price rise address themselves to the central fact that steel profits are particularly sensitive to the rate of capacity at which the industry operates. Since 1957, the annual average rate of operation has run about 67 percent of capacity. (A 90 percent rate, on the other hand, if that should be achieved this year, would yield a return on invested capital of 13 to 15 percent.) As steel output has stagnated, employment of production workers has declined. In '41 the American steel industry employed 530,000 production workers, and in January, 1962, only 450,000. Yet wage rates have skyrocketed. In 1941 the steel worker was paid 30 percent more per hour than the average worker in all manufacturing. In January, 1962, he was paid 35

How has this affected the public? Price increases in steel between 1951 and 1958, together with their in-

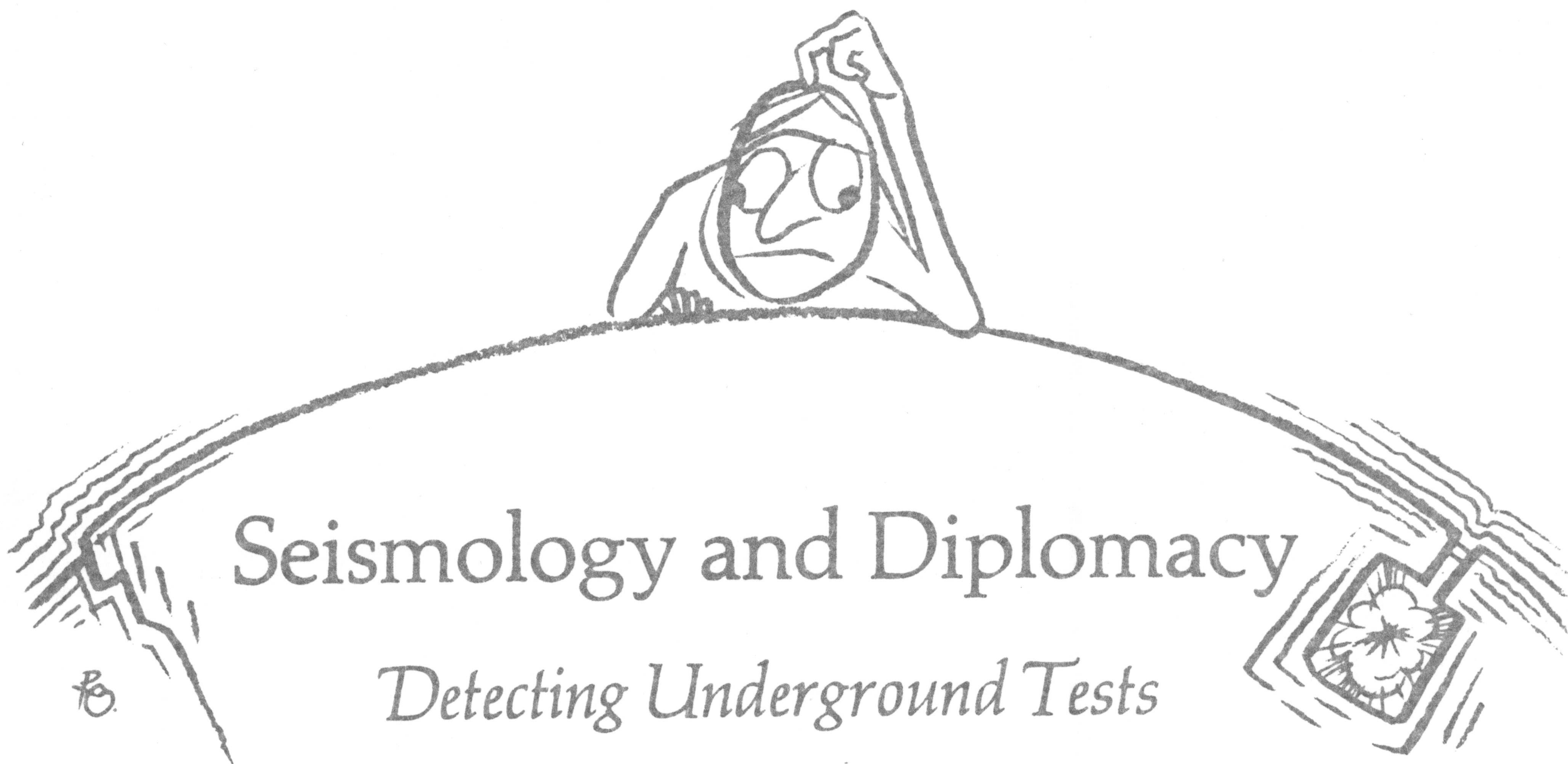
direct effect on other prices, were responsible for 40 percent of the change in the wholesale price level between 1947 and 1950, and for 50 percent of the change from 1953 to 1958. No other industry has been a more active engine in inflation. From 1946 to 1961, the general index of wholesale prices (other than farm and food) rose by 63 percent; the index of iron and steel prices rose 130 percent. And with what results? The industry has been pricing itself out of the market, first abroad and then at home. Imports of steel rose from 1 million tons in 1954 to over 3 million tons in 1961.

Roused to fury by the betrayal of the steelmen, the President won his point, for the moment. But he and the nation are now faced with a tougher question than the "irresponsibility" of a few corporate directors: what is to be done about the concentration of economic power in a handful of producers who dominate steel and whose oligopolistic counterparts can be found in most other branches of industry and finance?

One answer is more of the same, with the President employing a public and private persuasion to achieve restraint by the corporate managers and their unions. But this approach provides no way of determining appropriate wage-price-output relationships. Moreover, "jawbone control" makes price restraint the be-all and end-all of economic policy, whereas there is much reason to believe, as we noted earlier, that the pricing and output policies of big business are directly related to high unemployment and slow economic growth.

A second alternative is a heartier attempt to increase competition in steel, autos, electrical machinery and other concentrated industries by vigorous trustbusting. In recent years, antitrust laws have been used to block mergers or punish price-fixing, but the divestiture provisions have been largely ignored. It may be that existing law needs amending to permit breaking up concentrated power when no conspiracy is present. The anti-trust attack has the virtue of maximizing free economic choice, but it has its limitations, too. Are large corporations the most efficient? How much more competitive would steel be if six producers, instead of three, accounted for more than half the output?

The third alternative would mean accepting oligopoly and taming it in some fashion. Senator Gore and others have proposed that dominant corporations justify in advance before some public board plans to increase prices. Gore has also asked whether direct regulation like that imposed on public utilities isn't needed for steel. An imaginative solution has come from the fertile mind of Gardiner C. Means, the father of administered price analysis and author of *Pricing Power and the Public Interest — A Study Based on Steel*. In effect, Means would set up public interest performance standards for managers of dominant corporations and award them tax-privileged bonuses for meeting



Seismology and Diplomacy

Detecting Underground Tests

by William E. Boggs

The test-ban talks at Geneva are collapsing again, this time because the Soviets, repudiating their earlier position, insist that improvements in detection techniques make any form of international control and inspection unnecessary. Further, they now reject even their own scheme for a "self-inspected" treaty unless the French — who have consistently refused any part in the talks — also sign. But while the negotiations look hopeless, Western diplomats believe that the Soviets have raised the French issue merely to ensure that there will be no treaty until the next series of Soviet tests is completed. After that, the Russians are expected to drop this pretext and resume discussion of the question that has deadlocked the conference for almost three years: how to identify underground nuclear tests.

This question has become the last major area of disagreement between East and West in the treaty talks. Contrary to popular belief, the negotiators have worked out most of the other provisions for implementing a test-ban agreement. They have agreed in principle on techniques to monitor tests in the atmosphere and the oceans, and they acknowledge the need for further research on detecting tests in space. But the US still claims that control posts within the USSR, plus a number of on-site inspections, are necessary to "identify" suspicious events detected by the control system.

The US bases this claim on the results — or rather on the lack of results — of the seismic research being car-

ried out under Project Vela. Financed by the Advanced Research Projects Agency (ARPA) of the Department of Defense, Vela is a three-part program of research on test-detection systems: Vela Sierra involved surface-based systems for detecting tests in the upper atmosphere and in space; Vela Hotel, satellite-based systems; and Vela Uniform, seismic detection systems for underground tests.

The results of the Sierra and Hotel programs have stimulated a modest amount of dissent, but the recently released "no progress" report on the Vela Uniform project (detection of underground blasts) has provoked widespread criticism among seismologists in the US and abroad. The seismologists feel that the questions involved in the Geneva talks are political, not scientific; and many of them resent the implication that science, not diplomacy, is to blame for the stalemate.

With their traditional reticence to become involved in touchy political disputes, the scientists have debated the issue almost exclusively among themselves. But in the next few weeks, disgruntled seismologist L. Don Leet of Harvard, who feels that his criticisms of the Vela Uniform project have been ignored too long, plans to take his case directly to the public. The same tactic is being tried by scientists in the United Kingdom, who believe that their work suggests a solution to the problem of identifying underground tests. The UK experts have been remarkably temperate in their public statements, but they have leaked several reports to the press, and have let their views percolate upward to Mr. Macmillan, who in turn made them known to President Kennedy. The controversy stirred by these

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criticisms should bring the US diplomatic position at Geneva under close public scrutiny.

This controversy dates from 1958. At that time the Conference of Experts, consisting of scientists representing East and West, convened in Geneva to work out a control system to detect nuclear explosions in the atmosphere, underwater and underground. They agreed upon a worldwide network of control posts: 160 to 170 on land, and 10 ships. The posts would be spaced 600 miles apart in regions where earthquakes were frequent, and 1,000 miles apart elsewhere. According to US figuring, 19 of the posts would be in the USSR; according to Soviet figuring, 15. All posts would be equipped to detect tests in the atmosphere and underground; in addition, the ships would carry special hydrophones to monitor undersea explosions. The most controversial feature of the system, and one that has seemed of crucial importance to the West, was a provision for on-site inspections of unidentified events.

Agreement on the Geneva control system led to the Geneva Conference on the Discontinuance of Nuclear Weapons Tests, which opened later in the year. In the summer of 1959 another panel of experts, known as Technical Working Group I, broadened the Geneva control system by recommending techniques for monitoring tests at high altitudes and in space. A third panel, Technical Working Group II, was disrupted late in 1959 when the US members presented some controversial data on a series of underground nuclear tests known as Hardtack II, which had been conducted the

previous year at the Nevada Proving Grounds. The US scientists concluded that these tests had produced weaker seismic signals than had been predicted by the experts. Soviet scientists vigorously challenged this interpretation as being "tendentious." The session dissolved in disagreement when the US scientists introduced the theory that it would be possible to muffle or "decouple" a nuclear blast by firing it in a large underground cavity, preferably in salt or granite.

According to the new US position, the Geneva system could not detect and identify underground explosions with a seismic magnitude of less than 4.75, which the US estimated was equivalent to a yield of 20 kilotons. The State Department thereupon devised a complicated proposal that called for about 20 on-site inspections a year in the USSR. The Soviets, ever-suspicious of "espionage," responded by demanding an absolute veto over all inspections.

In 1960 the US offered a treaty that did not ban underground tests below seismic magnitude 4.75, and in 1961 provisionally reduced its on-site inspection demands to 12. The USSR offered three. Although this was the closest the two sides had come to agreeing the West rejected the Soviet offer as "inadequate."

In a speech early this year, the Secretary of State abolished the 4.75 threshold and proposed a treaty that would ban all tests without increasing the number of inspections demanded by the US. This concession, he said, was made possible by "increased experience and increased scientific knowledge." The knowledge apparently materialized quite conveniently, for earlier in the same speech he repeated the old US claim that "very little has been discovered up to date to justify a significant modification of the conclusions and recommendations of the Geneva scientists of 1958."

Secretary Rusk was dodging the issue. The experts concluded in 1958 that underground tests would be relatively easy to detect — easier, in fact, than the US has ever been willing to admit. Thus Mr. Rusk's implied agreement with the estimates of the Geneva scientists is really an admission of considerable progress in the technology of test detection. Seen in this light, the two statements in his speech are merely misleading, instead of contradictory.

The official US estimate of the capabilities of the Geneva control system was presented last July in testimony before the Joint Committee on Atomic Energy. The witness was Dr. Richard Latter of the Rand Corporation. In testimony that was later called "pessimistic" not only by scientists but even by Ambassador Arthur H. Dean, the head of the US delegation at Geneva, Dr. Latter estimated that the Geneva system could detect and identify atmospheric nuclear explosions larger than one kiloton carried out at altitudes up to 30 miles; that the system could detect and probably



identify underwater explosions larger than one kiloton; that it could detect unshielded explosions larger than 10 kilotons carried out in space at distances up to a few tens of millions of miles from the earth, and shielded explosions (which have not yet been proved possible) larger than 10 to 100 kilotons. For underground tests, Dr. Latter estimated that the system could detect and locate, but not identify, fully coupled nuclear explosions larger than 0.5 to one kiloton. For fully decoupled explosions in salt, he estimated that the system could not detect a blast with a yield less than 150 to 300 kilotons; that is, roughly 8 to 15 times the yield of the Nagasaki bomb.

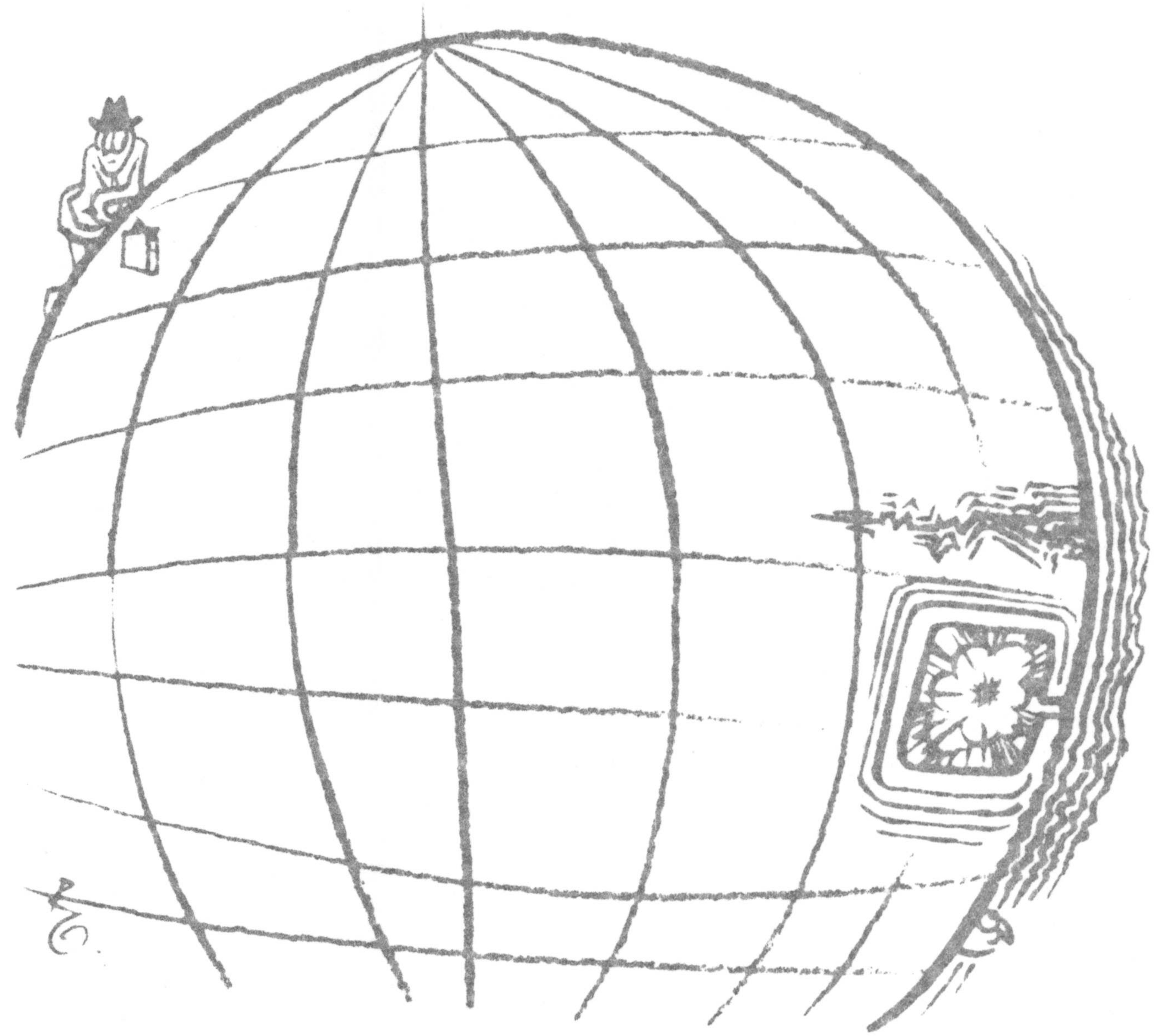
He also testified that 100 to 140 shallow earthquakes of seismic magnitude 4.75 or larger occur each year in the USSR. Only half of them, he argued, could be identified as earthquakes by the Geneva system. The remaining 50 to 70 tremors would presumably require on-site inspection.

This is an excellent apologia for continued US insistence on a large number of inspections. After reading it, one wonders about the "increased scientific knowledge" that led Secretary Rusk to raise the number of seismic events to be covered by the treaty without raising the number of inspections. But Dr. Latter's gloomy testimony presents only part of the picture, for it does not (and very properly so) take into account the military value of different types of tests, or the deterrent effect of an agreed-upon control system.

The Best Way to Cheat

Atmospheric tests, which are by far the most useful in the development of weapons, pose no serious detection problems. Nor is anyone seriously worried about underwater tests; they are hard to hide, and of doubtful military significance. The same is true of tests in space. (Theoretically such tests can be carried out by sending a rocket to an obscure corner of the solar system, separating it into two parts, and telemetering back coded data from one part about the explosion of the other.) Space tests would be expensive and difficult, and would be useful chiefly for determining whether a warhead will explode, and its approximate yield; they would be of little or no value for providing data on the effects of the weapon on specific military targets. Moreover, with a satellite detection system in operation, a potential violator of the treaty would probably have to shield the explosion from both the earth and the detectors. To do this, he would have to explode the weapon inside a lead-lined cylindrical balloon, which would have to be inflated in space and oriented with fine precision.

The deterrent effect of the Geneva system on the plans of a potential violator was emphasized by Dr. Herman W. Hoerlin and Dr. Donald R. Westervelt of



the Los Alamos Scientific Laboratory, both of whom have had extensive experience in the development and testing of nuclear weapons. In a letter to the Joint Committee on Atomic Energy, they stated that even a limited detection capability can make clandestine testing "technically very difficult, extremely wasteful in terms of scientific manpower, and economically expensive." Consequently, they "cannot share his [Dr. Latter's] pessimism" about the capability of the system.

To a potential violator of a treaty, an underground test would probably seem easier and less risky than a test in space. But there would still be powerful drawbacks. Because underground tests must be relatively small, they can yield only a limited amount of information; they are chiefly useful in testing small-scale prototypes of new weapons. Other drawbacks are time and expense; to hollow out the 750-foot cavity necessary to muffle a 90-kiloton test would take more than two years and cost more than \$14 million. Moreover, to keep the risk of detection at a minimum, the site should be located in an area subject to frequent earthquakes, which would complicate the excavation problems. There is also the danger of "venting": the escape of radioactive debris into the atmosphere through a fissure opened by the blast. This unpredictable – and perhaps unpreventable – accident occurred in both the Gnome test last year in Nevada, and in the recent French underground test in the Sahara, although in both cases the engineers at the site took every precaution against it.

Although the chances of getting away with an underground blast may seem slim to a potential cheater, they will naturally look larger to the nation that has to detect him. The only way to detect an underground test at long range is by its seismic signature. The tech-

nique depends on the fact that any violent underground shock sets up vibrations, or waves, that travel through the rock layers of the earth. Some of the waves travel along the surface, and others, known as body waves, travel through the earth's interior. Body waves are classified as primary (P) or secondary (S) in the order of their arrival. They are detected by a seismometer, an instrument consisting of a massive frame anchored in the earth, and a weight that is either supported by springs or hung as a pendulum. As the waves reach the instrument, the frame vibrates with the earth while the weight remains stationary. The relative motion of the two is detected and amplified, either mechanically or electrically, and recorded as a wavy trace on a moving strip of paper. The complete apparatus, including the recording device, is called a seismograph.

To the layman, a seismograph record of a blast looks identical to that of an earthquake, but an expert can usually detect small differences. In a few cases (about five percent, according to physicist Hans Bethe) the event cannot be identified as an earthquake from seismic records alone. It was this problem that led the Conference of Experts to recommend on-site inspections. It also led the Department of Defense to underwrite the Vela Uniform project.

Seismic Detection

Government-sponsored research has stressed three main criteria for identifying the seismic signature of a blast; scientists call them *first motion*, *depth of focus* and *location of the epicenter*. The *first-motion* effect depends on the fact that in an earthquake the rocklayers of the earth's crust undergo a shearing motion that compresses the surrounding rocks in some directions, but not in others. On the other hand, a blast compresses the surrounding rocks in all directions. Thus the first wave from an earthquake should appear as a compression, or "peak," at some seismograph stations and as a rarefaction, or "trough" at others; the first wave from a blast should appear as a peak at all stations. The Geneva Experts predicted that by determining the first motion on the seismograph tracings of many stations, the control system could distinguish a blast from an earthquake.

The first-motion technique has two chief drawbacks: *background noise* and *the shadow-zone*. Background noise is the name given to all the unwanted signals that register on a seismograph. These signals, which can be compared with the interference and "static" picked up by household radio receivers, sometimes obscure the first motion on the seismograph trace. The relative strength of the signal — the *signal-to-noise ratio* — can be increased by using arrays of 10 to 20 seismometers connected by cables to a central recording station; the

multiple signals from the array are added electronically and recorded on magnetic tape. The data is later processed by computer to "phase out" the noise. Another method of reducing noise is to place seismometers in deep bore holes, or on the ocean floor, locations which are seismically much quieter than the earth's surface.

The *shadow zone* is created by the bending of seismic waves as they pass through the earth. As a result, the waves are undetectable in a zone extending from about 600 to 1,500 miles from their source; this area is called the shadow zone, or the second zone. To be effective, a detection station must lie either in the area closer than the shadow zone (the first zone), or in the area just beyond it (the third zone). Under the spacing permitted by the Geneva system, there will rarely be more than two stations in the first zone, which is not a large enough number to apply the first-motion criteria with a reasonable degree of certainty. But by using arrays and deep-hole seismometers to reduce the noise level, seismologists might be able to get clear first-motion recordings at a sufficient number of stations in the third zone.

Some events that might appear questionable from their first-motion records can be identified as earthquakes by determining their depth of focus. This criterion derives from the assumption that nuclear tests would probably be fired less than a mile underground, whereas the focus (the point of origin) of an earthquake usually lies at a much greater depth.

If the first-motion and depth-of-focus findings failed to identify a suspicious event, seismologists would then attempt to locate its epicenter (the geographical point on the earth's surface directly above the focus). By observing the arrival times of seismic waves at several stations, and by using known travel-time curves to calculate how long they were en route, an expert can calculate the approximate epicenter of almost any seismic disturbance. If the epicenter lies in an area where nuclear tests are unlikely, such as a heavily-populated region, the event is probably an earthquake. If the epicenter lies in an area where earthquakes are rare, it is probably a blast. This logic would be of little value, however, in identifying suspicious events occurring in regions subject to frequent earthquakes, such as the Kamchatka Peninsula of the USSR. In that case, the chief value of locating the epicenter would be to tell the on-site inspectors where to drill.

No combination of these techniques appears capable of identifying all of the disturbances that they detect. There will always remain a certain number of unidentified events. The number that might occur each year in the USSR is a topic of debate; if one accepts Dr. Latter's conclusions, then it appears that there will be more than 100 seismic events each year within the USSR that could not be distinguishable from tests.

It would be almost impossible, and certainly impractical, to inspect all of these events even if the Soviets would allow it, which they undoubtedly will not. A single, thorough inspection can cost millions of dollars and require up to two years. US findings indicate that it would not be feasible to carry out more than 12 such inspections a year. This number thus appears to be the upper limit to what we can logically ask for at Geneva.

Leet's "Lonesome P"

Professor Leet, director of the Harvard seismograph station, believes, however, that the lower limit is zero, or, at most, one or two inspections a year. According to his own calculations, "If you can detect it, you can identify it." He maintains that the Geneva system can be improved to this capability by adding a few more earthquake seismologists, such as himself, to the Vela Uniform program. In a letter to the *New York Times*, which that newspaper declined to publish, Leet stated: "If the Department of Defense, Arms Control and Disarmament Agency, or any other agency of our government wants for good and sufficient reasons to insist on frequent inspections of Russia, that's fine, and I'm all for it if it is urgently needed. But I dissent vigorously from their trying to make it appear that they are helpless victims of the intransigencies of nature, and basing their policy on the 'experimentally proven' difficulty of detecting by seismological means pact violations involving underground shots. They have proven nothing of the kind."

Professor Leet's charges have appeared in the *Harvard Crimson* and in the magazine *Cambridge 38*. A longer article by Professor Leet will appear in the June issue of *Scientific American*. Because his opinions about the Vela Uniform project find almost no support among

his professional colleagues, the article should, as one seismologist put it, "create quite a stir."

In the article, Professor Leet lists four major differences between the seismic records of blasts and earthquakes: first, for blasts, the ratio of the energies of Secondary and Primary waves is greater than the corresponding ratio for earthquakes; second, the period, or cycle, of blast waves is shorter than that of earthquake waves having the same total energy; third, the presence of certain types of surface waves (known as hydrodynamic and coupled waves) at short distances from the epicenter is characteristic of blasts; fourth, and most important, at long distances from the epicenter the S waves disappear, leaving only waves that Professor Leet calls "the lonesome P." He feels that taken singly these criteria have their limitations, but taken together they constitute a foolproof method of distinguishing blasts from earthquakes. He concludes that although one or two inspections might be useful to check on whether or not the system is working, essentially the Soviets are correct in claiming that on-site inspections are no longer necessary.

Between the extreme position of Dr. Latter on the one hand, and Professor Leet on the other, lies the viewpoint taken by seismologists in the United Kingdom. Although their work has, in general, paralleled that of some of their American colleagues, there is a notable difference of opinion about the significance of the British results.

The UK approach has emphasized studies of first motion, using a large cross of seismometers, to improve the signal-to-noise ratio. The British seismologists set up one of their arrays at a site near Laramie, Wyoming, and reported "very good results" in monitoring recent US underground tests, particularly the Gnome explosion. American seismologists agree that the British



arrays sharply improve the signal-to-noise ratio, but do not agree with the British claim that the arrays will improve the present capability to identify the source of a detected disturbance.

Seismologists in the UK are also optimistic about improving the technique for determining depth of focus (how far beneath the earth's surface an earthquake has occurred). A method based on the work of Dr. H. I. S. Thirlaway of Atomic Energy Authority promises to yield more precise data than present ones, particularly when combined with the use of arrays and computers.

The Political Decision

The seismological evidence suggests that the present US policy in Geneva exaggerates the difficulty of policing a test ban treaty. The two main reasons seem to be; first, that planners in the State Department believe that an uninspected treaty would set a dismal precedent for negotiations on general disarmament; and second, that planners in the Atomic Energy Commission, the CIA and the Department of Defense must somehow justify their demands for control and inspection, which they believe are powerful deterrents to Soviet aggressive behavior. They argue that the presence of international control posts on Soviet soil would make it more difficult to conceal preparations for tests, and that the threat of inspection would increase the risk of being caught. Their aim is to make this risk so great that it would outweigh the possible military advantages of cheating.

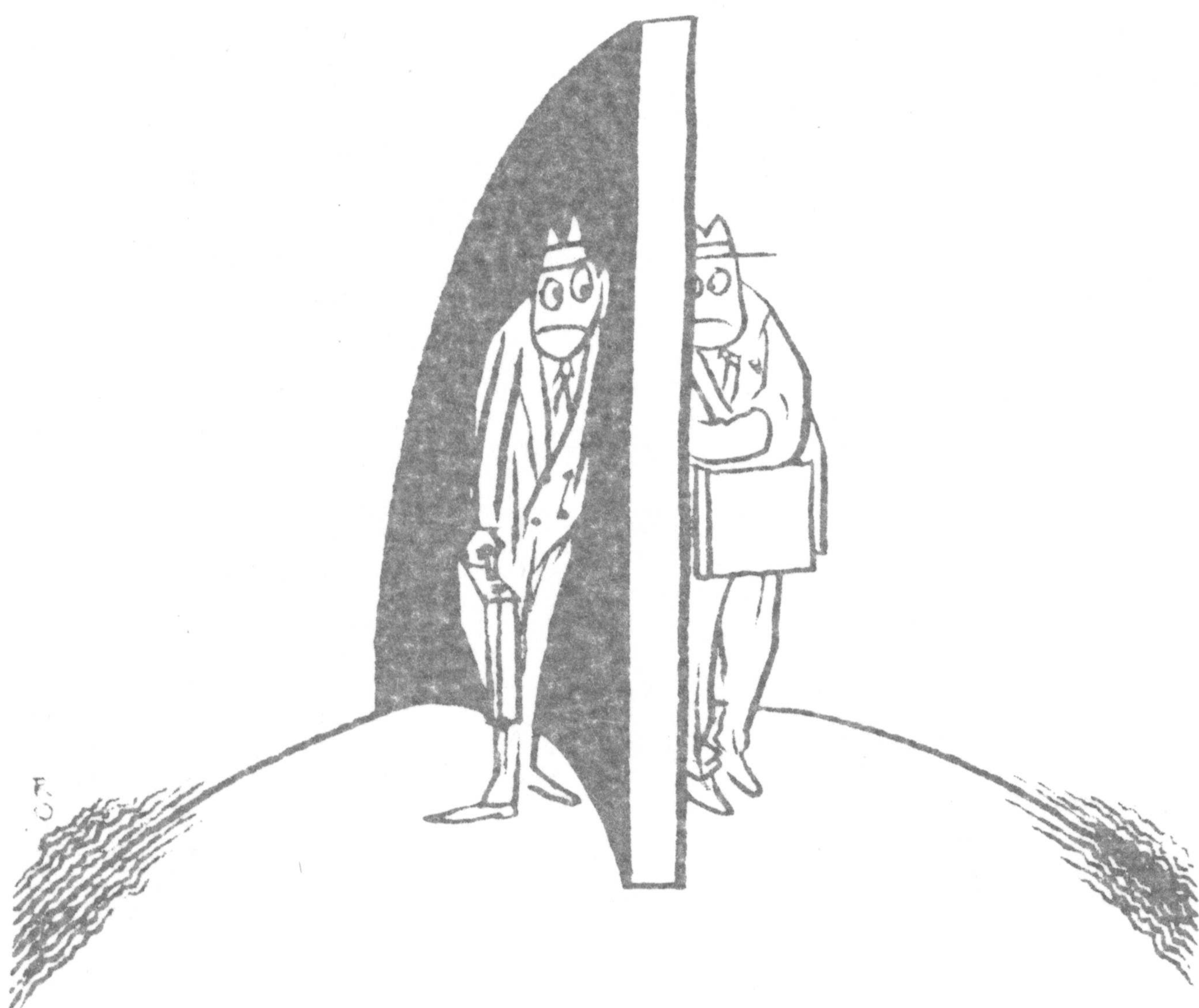
But the deterrent value of existing detection methods already appears adequate for this purpose. Even without on-site inspection, the Geneva system, or perhaps a more elaborate national system, could identify any significant series of underground tests. From a technical standpoint, as *The New Republic* pointed out last

month, the risks involved in a nationally-monitored treaty are not much greater than of an internationally-monitored one. And the technology of seismic detection will undoubtedly improve. Moreover, the US can also rely on other than seismic means of detection, including spies, reconnaissance satellites, Soviet defectors, and so on. Any nation would find it difficult to keep secret the deployment of a mass of field equipment and personnel necessary to prepare a test site. The real question, as a prominent seismologist put it, is: "Just how small a test do they want to be able to identify? This is a political decision and it should be made at the Presidential level."

As for the State Department's concern for inspection as a precedent, I would underscore the comment of Morton H. Halperin of the Harvard Defense Studies Program: "The Administration should be clear whether it wants international inspection and an international organization because they are required to implement the step under consideration [a test ban], or only to pave the way for further steps. The two have become so hopelessly tangled . . . that now the Administration finds it difficult even to contemplate a nationally-monitored test suspension."

A way to break the Geneva deadlock was suggested in 1960 by the chief of the Soviet delegation, Mr. Semyon K. Tsarapkin: "We believe that the question of inspection could and should be settled as a political question, independently of the contentious problem of the number of unidentified events." Of course the present attitude of the Soviets — that they will permit no inspections whatever, and allow no control posts on their soil — makes it difficult for the US to settle the issue politically without losing face. After the next round of Soviet nuclear tests, however, the political climate will probably be favorable for some compromise that the US could safely accept, perhaps a proposal to revert to the former Soviet offer of the Geneva system and three inspections a year. If the Soviets refuse that, the next step could be to agree to a ban with a single inspection a year. This would have some value as a deterrent, and it would still not set a bad precedent for talks on general disarmament.

Finally, the only kind of treaty we may be able to get might be a nationally monitored one. This, of course, would require a reappraisal of US policy, and a strategic retreat from a position based more on propaganda than on scientific fact. To save the earth from further radioactive contamination, to put a brake on the race to test nuclear weapons, and to take even one halting, skeptical step toward disarmament, the price would seem to me to be a small one. One fact is certain: the next break-through on the test-ban problem will have to come not from the laboratory, but from the White House.



File WHAT SANE IS AND IS NOT

by Dr. Homer A. Jack*

DEC 14 1962

There is understanding and misunderstanding about the complex role of the National Committee for a Sane Nuclear Policy in the United States and abroad, and its role within the panoply of American peace organizations. Perhaps we can begin by enumerating first what SANE is not.

SANE is not gradualist. We believe that disarmament must come today--or tomorrow we will die. Great problems demand grand answers. Herein we differ with those who believe that there is still time for tiny steps. There must be bold, courageous moves. However, we believe in the educative, political, legislative process throughout. We do not as an organization advocate civil disobedience.

SANE is not partisan. We believe no one political party holds a monopoly of political virtue, especially regarding disarmament and peace. We differ from some of our friends who believe only in the political process. We believe in both education and politics. However, we recognize that the political dimension is the very frontier of our organization.

SANE is not elitist. We work with policy-makers and the so-called influentials, but we know how impotent we are in Washington or even at the U.N. unless we are backed up in depth by the real influentials in our democracy: the people in the districts and wards, in the churches and synagogues and unions, in local SANE committees throughout America.

SANE is not sentimental. We feel deeply, and act strongly, but try to follow feeling with fact, reason with research. Herein we differ from those who depend only on their hearts and ignore their heads in working for disarmament. We want peace, yes; but we really seek peace plus -- plus freedom, plus justice.

SANE is not totalitarian. We want no part of the double standard which judges American foreign policy with principles different from those used in judging the policies of other nations. Herein we differ from those peace organizations in some parts of the world which tend to speak for government, not to government. We praise our own government when we can, yet we do not hesitate to criticize our government or any other government when we must.

SANE is not unilateralist. We do not believe that the U.S. should disarm alone. We believe in phased, inspected disarmament made by mutual agreement among all nations. We differ from our sister organizations in the United Kingdom which want unilateral disarmament for Britain. Even they believe with us in multilateral, agreed, and inspected disarmament for the two nuclear giants. However, SANE does support political and military initiatives by the U.S. to break the present impasse and to dramatize our desire to convert the arms race into a peace race.

SANE is not pacifist. We are pragmatic, not absolutist. We believe that modern war does not work and that other methods are needed to allow change, yet keep the peace in the modern world. Herein we differ from some organizations which oppose war primarily on religious or ethical grounds. However, there is room in SANE for individual pacifists and there are a number among our members and leaders.

*Adapted from an address given at the Fifth Anniversary Banquet of the National Committee for a Sane Nuclear Policy at the Hotel Biltmore, New York City, November 15, 1962.
Dr. Jack is executive director of the National Committee for a Sane Nuclear Policy.

SANE is not paranoid. We have faith in the democratic process. We are heard and we mean to continue to be heard. We do not feel hopeless. We are not fatalistic. We want to succeed, but we are not tied to success--at least in immediate terms. If we can succeed only in postponing the final holocaust during our generation by abolishing nuclear tests, by minimizing the risks of accidental war, by beginning the process of general disarmament, by leaving the world a still precarious but perhaps more hopeful place for our children, we shall have "succeeded" to some degree. In sum, we feel that the citizen of the U.S. can still make a difference, and that the grain of the universe is for peace, not war.

If SANE is not gradualist, not partisan, not elitist, not sentimental, not totalitarian, not unilateralist, not pacifist, not paranoid, what are we? What has SANE done in the past 5 years positively? SANE has helped bring the nuclear testing issue out of the American shadows. SANE has given substantive leadership on half a dozen disarmament issues in half a dozen crisis situations. SANE has reached deep into the American people, especially with our Dr. Spock advertisement and our subway poster. SANE has secured what could be called a presence within the U.N., within some non-aligned delegations, not only here in New York but on occasion in Belgrade, Accra, Geneva. SANE has given heart to some non-aligned peace organizations, in Canada, Europe, Asia, and SANE has tried to work responsibly with aligned peace organizations such as the Soviet Peace Committee.

Tangibly, what have we accomplished? We of the combined American peace movement have made some negative gains, in staving off atomic war perhaps, certainly in preventing the full civil defense program. We have made a few very positive gains, such as the creation of a U.S. Arms Control and Disarmament Agency and the buying of U.N. bonds.

SANE is a first-step, almost "vestibule" organization within the range of American organizations which someday might constitute a great, dynamic American movement for disarmament. We of SANE are the vital center of the peace effort. We cannot help but be conscious of our centrality, even through the enemies SANE makes, including the "National Guardian" on the left and the "National Review" on the right.

More important than our enemies are our friends, not only 25,000 Americans who are members of SANE but our friends among the non-aligned states and their peoples at the U.N. and at the Geneva Disarmament Conference, states which are close to the creative instinct of world public opinion. In a word, SANE is a non-aligned, non-governmental organization working in an aligned government and a divided world. This is a difficult role for any non-governmental organization to play, but play it we must and play it we will, and with your help we try to fill this role, using reason and responsibility.

DEC 14 1962

The National Executive Committee of the National Committee for a Sane Nuclear Policy at a special meeting on Friday, December 7, 1962, issued the following statement:

"The House Committee on Un-American Activities has subpoenaed certain members of the Women Strike for Peace.

"In our society, no organizations, including those concerned with preventing war, should be dominated or threatened by government, any more than such organizations should be endorsed by government. One important way in which the U.S. differs from the U.S.S.R. is that the U.S. peace organizations have been completely free of governmental control.

"No valid legislative purpose can be served by the present action of the House Committee on Un-American Activities. Congressional committees are not law-enforcement agencies and they have no constitutional right to act in a quasi-judicial capacity.

"A Congressional investigation of any organization concerned with preserving the peace represents an act of intimidation against the right of citizens to express their opinions on matters of human survival, and also threatens the exercise of the right of all non-governmental organizations to maintain an independent political position. Peace organizations have not only the right, but the duty, to dissent when they are convinced that any nation's policies are contrary to the best interests of humanity.

"The right of dissent is a most precious heritage. It should not be compromised by irresponsible actions of congressional committees. We call upon the House Committee on Un-American Activities to withdraw its subpoenas and cancel its hearing."