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In This Issue:

The State of Physics; or the Perils of Being Important	
Samuel K. Allison	2
The Role of the National Laboratories in Atomic Energy Development	
Henry D. Smyth	5
Can We Have International Control of Atomic Energy?	
Leo Szilard	9
An Interim Plan for International Control of Atomic Energy	
David F. Cavers	13
A Proposal for an Atomic Armistice	
Cuthbert Daniel and John L. Balderston	17
United Nations Atomic Energy News	
Francis W. Carpenter	18
The Conquest of the United States by Germany	
Hans J. Morgenthau	21
Science, Politics, and Citizenship	
Sir Robert Watson-Watt	27
The City of Washington and an Atomic Bomb Attack	29
Progress in AEC Reactor Program	31
"Constructive Uses of Atomic Energy"	
Reviewed by Austin M. Brues, M.D.	32

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CAN WE HAVE INTERNATIONAL CONTROL OF ATOMIC ENERGY?



Leo Szilard

Professor of Biophysics
University of Chicago

THE policy of the United States to strive for an agreement eliminating atomic bombs from national armaments originated in 1945 with President Truman. There is no evidence that he has ever given up the hope that this policy may yet be put into effect.

Today the American people seem to sense the hardships and dangers that we face if the atomic arms race begins in earnest. Thus, while our representatives at Lake Success keep on playing their gramophone records whenever the subject of atomic energy comes up, the public has begun to grope for some solution that might lead to a satisfactory agreement.

In magazine articles and in the daily press, questions are being asked whether we couldn't reach agreement on atomic control by dropping the demand for the elimination of the veto, by defining the stages in a manner that will satisfy Russia, or by proposing some form of control other than that of international management which we have hitherto tried to push. It is being suggested that perhaps we should couple the discussion on atomic energy with discussions aimed at general disarmament, as the Russians had always wanted us to do. Finally, it is being proposed that we conclude a convention which would pledge the nations, in case of war, to refrain from using atomic bombs and perhaps even renounce all strategic bombing.

There seems to be a general feeling that somehow we ought to try to stop the arms race right now, that the crying need of the hour is a stand-still agreement on armaments which will give us a breathing spell.

Do these questions, suggestions, or proposals point a way to the solution of the problem with which we are faced? I do not believe so. I rather believe that we shall not be able to

make any progress unless we first review our over-all foreign policy. I believe that the crying need of the hour is a stand-still agreement not on armaments, but rather on Germany. For what Russia and the United States may do in Germany in the near future might create a situation which cannot be remedied later. It might deprive Russia and the United States of freedom of action as far as disarmament and peace are concerned.

You probably know the story of the drunk who was poking under a street lamp in Trafalgar Square in London when a policeman tapped him on the shoulder and asked him what he was doing there. "I am looking for my house key," said the drunk. "Did you lose it here?" asked the policeman. "No," said the drunk, "I lost it in Soho." "If you lost it in Soho," said the policeman, "why, then, do you look for it here under this lamp?" "Well," said the drunk, "There is light here, and in Soho it is dark."

My point is, that the key to the control of atomic bombs does not lie in the narrow area of atomic energy on which the spotlights of public discussion are focused, but rather in the dark fields of our over-all foreign policy which are only scantily illuminated by occasional comments.

THE REAL ISSUE

What is the real issue between Russia and the United States? What is the main goal of our present foreign policy in Europe?

In 1939 Great Britain decided to go to war with Germany rather than to accept a situation in which one country would militarily dominate the continent of Europe. The war was won, but when it ended, one country, Russia, had a dominating military position on the continent of Europe. Soon after the war ended, Belgium, France, and Holland were militarily at the mercy of Russia in the sense that

Russian land armies could have overrun these countries.

We would rather not leave Western Europe for long at the mercy of Russia if we can help it. We have hoped to strengthen and arm Western Europe to the point where it could successfully resist a Russian attack until an American expeditionary force could come to its assistance.

Because we have been thinking in these terms for the last few years, we were not willing to consider an agreement providing for general disarmament, which Russia appeared to desire. For general disarmament—so we argued—could not touch Russia's main source of military strength—her large manpower which enables her at short notice to put into the field huge land armies. Thus general disarmament would perpetuate a situation in which France, Belgium, and Holland are militarily at the mercy of Russia.

By integrating Western Germany politically and economically with the rest of Western Europe, we have hoped to strengthen Western Europe to the point where it would be capable of holding an attack by the Russian armed forces.

IS OUR GOAL ATTAINABLE?

The first question I am going to raise is whether this goal of our foreign policy is still attainable now that Russia will soon have an appreciable quantity of bombs.

Because of the importance which a few large cities play in her structure, Western Europe is exceedingly vulnerable to atomic bombs. When Russia will be in a position to deliver such bombs in quantity anywhere in Europe, and when there will be nothing that America can do to protect European cities from destruction at the outbreak of the war, then the Atlantic Pact will have lost much of its value to Europe.

The rearmament of Western Germany would enormously strengthen the military power of Western Europe, and it will therefore undoubtedly be advocated on the ground that it is a calculated risk. But I believe it would be more correct to say that it is an incalculable risk.

Perhaps Western Germany, rearmed,

Address given December 10, 1949 to the Rochester Institute of International Affairs, Rochester, New York.

would fight on our side. Perhaps even without rearming Western Germany, we could make Western Europe strong enough militarily to offer us a reliable base of military operations; perhaps in spite of bombs the French would hold out; perhaps there would be no Dunkirk. Maybe we could count on France as our military base in case of war and thus avoid the need to plan on establishing bridgeheads on hostile shores in Europe.

On questions of this sort, it is difficult to speak with any degree of assurance. There may be doubt either way, and I am content here, having raised the question, to leave it unanswered.

A CHOICE MUST BE MADE

But now we have to answer another question. Can we continue to pursue our foreign policy aimed at preventing Russia from dominating the continent of Europe, and can we at the same time, obtain an agreement with Russia on eliminating atomic bombs from national armaments?

To this question my answer is a clear and unequivocal NO.

As long as we hold on to our present political goal in Europe, Russia will hardly be willing to deprive herself of the one weapon which, in the long run, might induce Western Europe to abandon her alliance with the United States. And even if this consideration did not weigh heavily with Russia as it probably does, there is still this to be said:

Any effective agreement relating to disarmament and the elimination of atomic bombs must of necessity provide for measures of inspection of considerable scope. But under present conditions, Russia has valid reasons to keep the location of her key industrial installations secret, and therefore looks upon the Iron Curtain as her most important strategic defense. As long as we continue to regard France, Belgium, and Holland as a base of military operations against Russia; as long as we remain in a position to re-arm Western Germany if we choose to do so; as long as we keep on developing long-range rockets as well as long-range bombers and actually remain in the possession of a considerable fleet of such bombers, Russia will have valid reasons for refusing to enter into any agreement that provides for international inspection of installations on her territory.

I conclude that an agreement between Russia and the United States on atomic

disarmament is incompatible with the continuation of our present policy in Europe. We shall have to choose the one or the other; and clearly, this is not a choice to be lightly made.

WHAT USE IS AN AGREEMENT?

Suppose then, for the sake of argument, that we are inclined to choose atomic disarmament and want to secure a peace settlement that would provide for general disarmament as well as the elimination of atomic bombs, is there any way for us not only to obtain such a settlement but actually to secure peace? Is there any way for us to offer France, Belgium, and Holland any security short of militarily counterbalancing the Russian land armies in Europe? To what principles can we look in a search for a method to give these countries security?

These are the questions that I now propose to examine.

At the end of the First World War, peace could have been secured if the Western World had embraced the principle of collective security. The Second World War would probably not have occurred if collective action had been taken against Japan in 1931 when she invaded Manchuria, and failing that, if, by collective action, an oil embargo had been imposed on Italy when she attacked Abyssinia. All this time, Germany was watching on the sidelines, and when Italy was allowed to get away with it, she drew her conclusions.

The thesis that collective security could secure the peace was true after the First World War, but at that time it was rejected; today this thesis seems to be generally accepted, but it is no longer true. At least it is not true where Russia and the United States are concerned.

Russia and America are each militarily so powerful that no likely combination of nations would be in a position to coerce either of them. Moreover, militarily, the more important nations of the world must be considered as allies of either Russia or America and could not be expected to participate in collective action against their ally.

While it is a necessary prerequisite of peace that an agreement be reached between America and Russia, today there is no possible way to enforce such an agreement on the basis of collective security. And here we come to some vital questions:

"What is the use," you may ask, "of concluding an agreement if it cannot be enforced?" You may ask, "Can Russia be trusted to keep an agreement?"

Clearly a general peace settlement will deal with issues that are vital for America and Russia, and when such issues are at stake, nations cannot be trusted to keep an agreement unless the agreement is compatible with their vital interests, and keeps on serving their vital interests.

"What, then," you may ask, "is the use of concluding an agreement if the contracting parties can be trusted to keep it only as long as it suits them to do so?"

As I see it, this is the crucial question, and war or peace might turn upon our finding the right answer to this question.

I believe that today the problem of securing peace reduces itself to the successful accomplishment of two tasks: first, the drafting of an agreement which will reconcile the vital interests of America and Russia; and second, having concluded such an agreement, the adoption by both the United States and Russia of policies that will ensure that the agreement will continue to be in accordance with each other's vital interests. Unless these requirements are met, the agreement will be of no value.

In the absence of any possibility of enforcement, the agreement will be of value only if it is so well balanced and so well adjusted to the real interests of the contracting parties that, if it were to lapse, they would, of their own free will, conclude it anew. An agreement that fulfils this requirement, might be said to be self-regenerating.

Could this requirement be met? I rather believe so.

If we approach the problem of drafting an agreement on the basis of such considerations, then clearly we must not consider our own interests only, but it is equally important to ask ourselves what the interests of our friends in Western Europe are and what the interests of Russia are—what these interests are today and what they are likely to be in the future.

And even though Germany might not be one of the negotiating parties and an agreement might be imposed upon her, we will still have to be fully aware of her vital interests. For if we want to have peace, we shall have to make sure that the agreement does not run counter to her vital interests either.

OUTLINES OF A POSSIBLE AGREEMENT

If we are ever to get an over-all agreement, it is high time that the public discussion of such an agreement should get under way. Naturally the

first tentative proposals will look foolish later, as public discussion reaches a more advanced stage. But because a start has to be made somewhere, sometime, it might as well be made right here and now. I shall therefore make an attempt to enumerate a number of points which such an agreement might comprise.

The basic philosophy of this tentative proposal is to balance in the agreement a major point in favor of Russia against a major point in favor of America. The agreement centers around a completely demilitarized but federally united Germany, not even precluding the possibility of a union of Austria with Germany.

The point in America's favor would be that this united Germany would be economically integrated with the rest of Western Europe.

The point in favor of Russia would be that America would accept the fact that Russia will have a militarily dominating position on the continent of Europe.

France, Belgium, and Holland would cease to be allies of the United States. They would form a neutral bloc of their own. The United States would guarantee their neutrality in the sense that as long as Russia does not violate the neutrality of any one of them, the United States will respect the neutrality of all of them. With regard to them, the United States would assume a unilateral obligation to go to war with Russia if Russia should invade any of them or force any of them to surrender.

The agreement would provide for a continental customs union in Europe which would include Germany, and freely exchangeable currencies among all the members of that union.

The agreement would provide for the elimination of atomic bombs from national armaments, for general disarmament, and for inspection of sufficient scope to make the provisions relating to disarmament effective.

Before going any further, there are two questions we must settle in our minds:

1. If we permit Russia to occupy such a dominating position in Europe, what then would prevent Russia from overrunning Germany, France, Belgium, and Holland? But perhaps we ought rather to ask what would induce Russia to overrun Germany, France, Belgium, or Holland. For clearly such an invasion would mean war with the United States, and, notwithstanding the degree of disarmament that might be agreed upon, the potential strength of

the United States in case of war will remain very great. Russia would therefore hardly provoke war with the United States without some very important reason for doing so.

Naturally, if Russia were willing to fight a world war for the sake of establishing Communist governments in Germany, France, Belgium, and Holland, there is nothing in the setup here proposed that would prevent her from occupying, after some initial resistance, all of Western Europe. There are those who believe that Russia would do just this. Those who believe this must of necessity reject the solution which is being discussed here, but they must also of necessity conclude that there is no chance of achieving atomic disarmament. They are entitled to their opinion, but they ought to draw the logical conclusion from it that there is nothing left for America to do now but to step up the atomic arms race. What that will lead to I do not propose to discuss on this occasion.



The rest of us, who do not go along with that view, must examine whether Western Europe could achieve security short of militarily counterbalancing the Russian land armies. Security based on military strength is not the only way to achieve security, nor does military strength necessarily provide security. And as time goes on and distances shrink, fewer and fewer nations will be able to attain security based on military strength.

The security of Mexico with respect to the United States is not based on military strength, nor is the security of Mexico absolute, and neither is her freedom of action absolute. For Mexico might no longer be secure if she decided to conclude an alliance with Russia and if Russia were to look upon Mexico as a base of military operations against the United States.

I should be inclined to think that Western Europe would be more secure from Russia under the proposed setup than it is today. For even in case of war with America, Russia might hesitate to violate the neutrality of Western Europe, if, by doing so, she would permit the United States to use Western Europe as a base of operations against her.

2. Military action, however, is not the only way by which Russia could conceivably conquer Western Europe. There will be those who think that Russia need not risk a world war in order to conquer Europe; that Russia can conquer it through Communist propaganda.

To me it seems somewhat curious that on the one hand, we tend to underestimate Russia's military power, and on the other hand, we tend to overestimate Russia's political power. Immediately after the war, Russia succeeded in creating Communist governments which are subservient to her in Poland, Rumania, and Bulgaria, and somewhat later in Hungary as well as Czechoslovakia. But in all these countries, Russia succeeded in this because Russian troops had moved in and, under their protection, a police force was established which was subservient to Russia. Yugoslavia, where Russian troops did not move in, has a Communist government, but her government is not subservient to Russia.

The popular concept that in countries like Italy, France, Belgium, or Holland, Russia might gain power through an armed insurrection of a political minority, is not supported by any precedent. To transform a group of civilians in opposition to the established order into a fighting force, that can successfully meet in peacetime the organized military and police force of the established government, is a task exceedingly difficult to accomplish. To my knowledge, it has never been accomplished in any European country in modern times.

* * *

If we thus tentatively conclude that an over-all agreement of the type proposed above is worth considering, then we must now examine the chances of Russia's accepting inspection and of getting inspection to operate in a satisfactory manner.

Should the proposed agreement in fact eliminate Russia's valid reasons for objecting to inspection, would then Russia be likely be welcome inspection?

Even then Russia would probably dislike the notion of inspection and everything that goes along with it. For secrecy is habit-forming as atomic scientists very well know from their own experience. Secrecy tends to persist long after the reasons which brought it into existence have ceased to be operative. You start off with secrecy for the sake of security and you end up with secrecy for the sake of secrecy.

Yet when an agreement is offered to Russia from which she would have

much to gain and which would make secrecy appear unimportant to her, Russia might overcome her reluctance to inspection.

In this respect we have an encouraging precedent in the record of the UNRRA control commissions that operated in Byelo-Russia and in the Ukraine. Here we offered Russia something she wanted—relief, and we asked for something that she did not want to give—freedom of movement for the Control Commission. Russia accepted our terms because she needed the relief. And she continued to keep the terms because she continued to need the relief.

We may dislike the Russian system of government, but at least it has this advantage: once agreement is reached on the highest level there is no sabotaging of the agreement at the lower levels. It might very well be that if we reach an agreement with Russia which provides for inspection, we would encounter even less trouble in Russia with inspection than she might encounter here in the United States.

Yet we must squarely face the fact that the United States or Russia might have grievances arising from the implementation of the agreement and that it is difficult to conceive of any international body to which both countries could entrust the right to adjudicate such grievances.

The only effective recourse that Russia and the United States would have in such a situation would be to record their complaint and to press for a remedy. And, in the absence of any adjudication of the complaint, they can effectively press for a remedy only if they have the right to abrogate the agreement. If either of them fails to live up to the clauses of the agreement which relate to disarmament and inspection, this might involve a vital threat to the other's security. It is, therefore, logical that the United States and Russia should retain the right legally to abrogate in self-defense. Paradoxical though it may seem, it might very well be true that the danger that the agreement will in fact be abrogated is less if Russia and America have the legal right to abrogate it.

It would be advisable, of course, to provide in the agreement for a cooling-off period before an abrogation would become final and go into effect.

Within the framework of an over-all agreement, the problem of Eastern Europe will have to be settled somehow. Shall we reconcile ourselves to Russian domination of Poland, Ru-

mania, and Bulgaria? I think that probably we shall not have much choice in this matter. We might raise the question of Hungary, and it would be even more important to raise the question of Czechoslovakia. For she, among all these countries, is the only one that has a long and successfully established democratic tradition. To return to a democratic form of government in Yugoslavia would also be of importance, but if anything can be done about this, the United States can do more about it at present than can Russia.

If we create a united Germany, one might consider whether the over-all agreement should not provide for the return to Germany, at some fixed future date, of the German territories which have been occupied by Poland. This, in turn, might make it necessary to compensate Poland by the return of at least some of the territories which Poland ceded to Russia with our approval. Because of the increasing domination of Poland by Russia, Russia's reluctance to cede territory to Poland might be less than it otherwise would be.

In this connection, Poland might be given further compensation in the form of large-scale economic aid aimed at the building up of her consumers' goods industries.

Such economic aid to Poland ought to be part of the general economic provisions of the agreement which might promise both Western and Eastern Europe economic assistance from the United States for an extended period of time. The greater Russia's stake would be in the economic revival of Europe, and the longer the period would be for which America would agree to assist in this revival, the greater confidence we could have in continued Russian cooperation.

Of all the problems involved in the making of peace, the most difficult is probably the creation of a prosperous and peaceful Germany—a Germany which is demilitarized and which both Russia and the United States can trust to remain demilitarized.

A necessary condition for a peaceful Germany is to have satisfied those national aspirations of Germany on which the overwhelming majority of the German people are likely to unite. Dismembering Germany, prohibiting Austria from joining a German federal union, or artificially limiting Germany's output of commodities, ought to be ruled out on this basis alone.

But even so, it is a foregone conclusion that in the years to come there will be a strong nationalistic movement in Germany.

How can we be sure that the police forces in Germany will not become subservient to a nationalistic movement? This latter problem cannot be solved simply by decentralizing the German police, for instance by subdividing it into the police forces of the individual German states. For the danger does not primarily lie in the transformation of these police forces into an army, but rather in the possibility that by capturing the police forces, the nationalistic movement may capture the government of Germany. Once that happens, then demilitarization of Germany could be enforced only by armed intervention which would upset the stability of Europe.

But even assuming the police force to be safe, if Germany is a democracy patterned on the Weimar Republic, a nationalistic movement might legally capture the government. What kind of political structure could we give Germany that would preclude this danger?

Superimposing some inter-allied control commission upon the government of Germany would hardly provide a workable solution to this problem. The creation of a supra-national governmental authority in Europe might solve it, but few countries in Europe would at present be willing to accept the restrictions which such a solution would impose on national sovereignty.

The question of Germany's political structure thus poses a problem which is probably incapable of a solution within the framework of established precedent. Something new, something imaginative, may have to be adopted. Perhaps we ought to base our thinking on the fact that the countries in Europe are strongly interdependent. What the German government does affects not only Germany, it affects all of Germany's neighbors. Perhaps it would be possible to base the government of Germany on a political structure that would take into account the fact of this interdependence. But to elaborate upon this point would go beyond the scope of this paper.

We have concerned ourselves here almost exclusively with the Russian-American conflict. There are other conflicts in the world which require attention. But if the Russian-American conflict is settled, the United Nations will come into its own. The edifice of the United Nations was erected on the premise that the great powers would act in agreement with each other. When that premise holds true, the United Nations will be able to function as it was meant to function.

(Continued on page 16)

all supplying industries in verifying the initial accounting for nuclear fuel output antecedent to control by the United States, Russia, and any other producing nations. This would require checking not only the operations of the separation plants and reactors that had been declared, but also the output of the declared mines, wherever located;⁹ the operations at all intermediate steps; and, finally, the secondary supplying industries, e.g., the producers or refiners of moderators, the manufacturers of instrumentation, wherever located.

Such a check, even though it were short of the goal of complete verification, would identify key points to be watched in the course of future control activity. Such surveillance would not require constant inspection but, to be effective, might call for more than the periodic reports from secondary industries provided for in Specific Proposal XV of the UNAEC's Second Report, Part II, Chap. 5.

Another mode of checking secret operations would be the registration everywhere of scientific personnel, including advanced students, trained in the special fields essential to nuclear operations. Periodic checks as to their whereabouts and activities would increase the difficulty and hazards of developing an entire illicit system of production.

CONSTANT VS. PERIODIC INSPECTION

If the high-security policy were not followed, then the issue of constant versus periodic inspection would be difficult to avoid. It is hard to deal with the issue objectively since it seems so palpably false. Since, however, the Russian insistence upon periodic inspection has been so emphatic, a method of achieving substantial control without requiring the constant attendance of inspectors at reactors is to be welcomed. And, since, in the case of reactors producing plutonium, the operation of withdrawing the fissionable material from the reactor appears to be a difficult one, might not requirements as to reactor design be imposed which would so extend the withdrawal operation over time that it could almost certainly be detected by inspectors making frequent visits to the reactor at irregular intervals?

⁹It would also be necessary, of course, to verify reports as to the location of all uranium and thorium deposits. As is made clear in Specific Proposal III, Part II, Chap. 3, of the UNAEC's Second Report, this would not require indiscriminate touring of the reporting nation's territory by teams of inspectors, and the likelihood that importantly significant military information would be incidentally acquired seems small. Therefore, this phase of the institution of a control plan, though requiring careful treatment in the control convention, should not afford genuine grounds for disagreement.

If this could be done, the importance of continuous inspection would be considerably diminished, especially when the relative character of the security achieved by any controls is kept in mind. Illicit removal would be so gross a violation that it would scarcely be chanced if the risk of detection in the process were at all substantial.

SANCTIONS

In this interim plan, as in any permanent plan, problems of sanctions in case of violation would be difficult, but the real deterrent to violations would be the risk that war would be precipitated, especially the risk of detection before a substantial advantage over other nations had been gained. This risk of war would, of course, be appraised in brutally realistic terms, since only a malevolent nation would have occasion to assess it. A unilateral declaration of national policy on this point might therefore be more potent than clauses in any control agreement. Such a declaration might simply state that violation of the control plan in circumstances indicating intent to gain military advantage would be interpreted as a act of "armed attack" within the meaning of Article 51 of the United Nations Charter.

THE TIMING OF PROHIBITION AND CONTROL

Would an interim plan be able to circumvent another obstacle to agreement—Russian insistence that the use of atomic weapons be prohibited simultaneously with the effective date of the control agreement? No answer to this problem seems derivable from the interim character of a plan, but obviously bilateral possession of nuclear fuel has eased the timing problem. This fact makes possible the following solution.

The convention prohibiting atomic weapons should go into effect at once, but the actual surrender of the atomic bombs and fuel should be required only after the expiration of three months, as the Russians themselves have proposed,¹⁰ and upon the certification by the control agency that it had completed verifying the accounting of all other producing nations and that those nations were prepared to surrender atomic bombs and fuel to it in accordance with

¹⁰A period of three months from the effective date for destruction of "all stocks of atomic energy weapons" is provided in the Draft International Convention submitted by the USSR at the second meeting of the UNAEC, June 10, 1947. The text appears as Annex 3(a) of the UNAEC's Third Report.

the verified accounts. Perhaps this accounting (which would have to be approximate) could be completed in three months, but, if a longer time were required, no nation would be obliged to turn over its nuclear materials until all nations had made an accounting.

Given, not reciprocal trust, but the will to enter into an arm's length agreement, the problems of devising a fair and secure interim plan could almost certainly be solved. And if such a plan were in operation for a decade, perhaps mutual trust would begin to take the place of suspicion and fear. Then, if science had found answers to the problems now unsolved, would come the time for a permanent control plan. Failure to reach agreement then, even if not followed by an extension of the interim controls, would leave us and the other nations of the world no worse off, and very probably better off, than we all are now.

Can We Have International Control of Atomic Energy?

(Continued from page 12)

In the absence of a settlement in the Russian-American conflict, the danger that the atomic arms race will now begin in earnest is very great, and the risks that this will involve for ourselves, as well as for all mankind, is incalculable. The over-all agreement proposed here might not be favored by those whose only concern is that the United States shall be in the best possible strategic position if war comes. But unless we are willing to accept a less favorable strategic position for the sake of greatly improving our chances of attaining peace, we might be unable to make any progress toward peace.

Because it may take time to re-evaluate our foreign policy, it might be necessary to arrive at some informal agreement with Russia to make sure that in the meantime no irrevocable decisions are taken on the German issue by either Russia or America.

Any attempt to make a new start and to try to negotiate with Russia on the issue of atomic disarmament without being ready to remove the major obstacle that stands in the way of agreement, i.e., without being ready to settle the basic strategic conflicts in Europe, can only lead to disappointment. The negotiations on atomic disarmament have failed once, and that is unfortunate. Allowing them to fail a second time might be disastrous.

Just How Important Is

THE ATOMIC BOMB?

IN these times of mounting tensions, the atomic scientists continue—as they have since the bomb fell on Hiroshima—to tell all who will listen of the social and political implications of their discoveries. Their message is increasingly important: “The responsibility to see that atomic energy is used for the benefit and not the destruction of mankind is ours—and YOURS.”

THE scientists do not claim to have all the answers but they are continually exploring the relationship between science and society, between the potentialities of atomic warfare and the survival of civilization. The monthly **BULLETIN OF THE ATOMIC SCIENTISTS** is their medium for keeping abreast of developments in this field. It should be yours, too, if you are to participate intelligently in the democratic decisions on which our destiny may hinge.

JUST how important is the atomic bomb? The term “atomic age” seems to have drifted into our vocabulary. Its implications are too often absent from our thinking. Recent issues of the **BULLETIN OF THE ATOMIC SCIENTISTS** show how the problems created by atomic energy impinge on every phase of our existence.

WARFARE. In an authoritative article, “How Dangerous Are Atomic Weapons?”, Edward Teller discussed the probabilities of newer, more powerful bombs, capable of producing a radioactive cloud that could endanger a continent. Austin Brues’ report of his observations with the Atomic Bomb Casualty Commission described the effects of atomic bomb injuries and revealed a previously untold story of the Japanese decision to surrender. “Atomic Bomb Explosions—Effects on an American City” by R. E. Lapp outlined the probable effects of an atomic attack on a city and examined some aspects of atomic defense.

POLITICS. A workable system for the prevention of warfare and the control of atomic energy is the only answer to the political problem posed by the atomic bomb. The **BULLETIN** has carried articles by Quincy Wright, Warren R. Austin, Leo Szilard, Abba P. Lerner, Edward A. Shils, Cuthbert Daniel and Arthur M. Squires, Harold C. Urey, Philip Morrison and Robert R. Wilson, David E. Lilienthal, J. Robert Oppenheimer, and others, all dealing with phases of this problem. In addition, the **BULLETIN** carries a monthly review of United Nations developments in the field of atomic energy, regular reports on the events in Washington, including extensive excerpts from Congressional proceedings. The **BULLETIN** also carries reports on atomic energy developments abroad by leading scientists in national atomic energy establishments. The **BULLETIN** has printed the texts or careful condensations of major documents issued by the UN and the United States Atomic Energy Commission.

ECONOMICS. **BULLETIN** readers are kept informed on economic aspects of atomic energy by articles such as the authoritative report on the costs of atomic power and the economic factors which may affect its use by Sam H. Schurr, co-director of the study of Economic Aspects of Atomic Energy conducted by the Cowles Commission at the University of Chicago.

SCIENCE. Although the **BULLETIN** is not a technical journal, its articles on the developments in science which importantly affect our civilization have attracted wide interest and comment. Articles by H. J. Muller, Lee DuBridge, Edward Teller, J. Robert Oppenheimer, and others have covered the field from the effects of radiation on the genes and heredity, to proposals for reorganization of research.

All these articles, and many more, dealt with problems of vital concern to you. If you missed them, you owe it to yourself as an intelligent citizen, to see that you do not miss future issues, as the **BULLETIN** continues its coverage of the most important problem the human race has faced since the discovery of fire.

Bulletin of The Atomic Scientists

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Fagley

1. Is this a new order of energy different in kind from atomic energy (radio-active clouds; even total disaster)

2. Are there no limits to weapons

3. Effect on negotiations for control

4. Effect on democracy - widening areas of secrecy

5. Relation to a just war; one for by just means for a just cause.
H bomb is a giant stride for all vs. all-total war. Is such permissible.

Szilard, or des. Prof of Biophysics,
Univ of Chicago

Acheson

Can't trust Americans...
overall settlement impossible.

Must taken action, on basic
premise that it is useful to reopen
negotiations for an overall
settlement of USSR. (vs. Acheson-
Truman doctrine).

1. Try to formulate what kind
of overall settlement might
be useful. Little that on this
so far. (See Szilard article)

Should create a commission
10-14 citizens to work 6 months
on fee. (corporation lawyers).
A board of 35 citizens to spend
a few days each month to review
commission's report.

So study real obstacles.
Then divide into 2 teams.
One to represent real interests
of USSR; one to represent USA
interests.
Board to transmit a report to

American people, with serious
important press give it wide
publicity, incl. reasoned
arguments why Russia
would have to reject Bernek
Plan, L.G.

Try to bring about a
meeting of Russian scientists,

*Each given before the National
Inst. of International Affairs
will be printed in the law book
of the Bull. of the Atomic Scientists*

Can We Have International Control of Atomic Energy?

By Leo Szilard

Introduction

The policy of the United States to try to ^{strive for an agreement} ~~eliminate by agreement~~ atomic bombs from national armaments originated in 1945 with President Truman; ~~and~~ he has never given up hope that this policy may yet be put into effect.

Unfortunately, our negotiations for the control of atomic energy were based on certain premises which were not very conducive to reaching an agreement. One of these premises is a matter of record:

In his book, Speaking Frankly, published two years ago, Mr. Byrnes relates that when he took office as Secretary of State he wanted to know--because he considered this a vital point in any system of control--how long it might take other governments to produce a bomb. "From all the information we received," he writes, "I concluded that any other government would need from seven to ten years at least to produce a bomb." Mr. Byrnes then goes on to say that because return to normal conditions was slower than he anticipated in all countries, his estimate of seven to ten years would have to be revised upward rather than downward.

The dissenting estimates of the scientists who actually developed atomic energy during the war put the time needed by Russia to produce a bomb somewhere between three and five years. Our unhappiness about the American position in the negotiations of the United Nations Atomic Energy Commission dates back to the very first day when Mr. Baruch introduced his plan and raised the issue of the veto. If we did not speak up publicly at that time, it was not because we were afraid of Mr. Baruch's scorn; if we were afraid of anything, we were rather afraid of Mr. Vishinsky's praise.

Knowing that Russia has the bomb, the American ^{people} ~~public~~ seems to sense the ^{and dangers} ~~dangers and~~ hardships that we face if the atomic arms race begins in earnest. Thus, while our representatives at Lake Success, ^{people} keep on playing their gramophone records whenever the subject of atomic energy comes up, the ~~american~~ public has begun to grope for some solution that might lead to a satisfactory agreement.

In magazine articles and in the daily press, questions are being asked whether we couldn't reach agreement on atomic control by dropping the demand for the ^{elimination of the} veto, by defining the stages in a manner that will satisfy Russia, or by proposing some form of control other than that of international management which we ^{have} had hitherto tried to push. It is being ^{suggested} that perhaps we should couple the discussion on atomic energy with discussions aimed at general disarmament, as the Russians had always wanted us to do. Those who have reached the conclusion that atomic energy control, in the true meaning of the term, ^{is} ~~might be~~ unattainable are now proposing that we conclude a convention which would pledge the nations, in case of war, to refrain from using atomic bombs and perhaps even renounce all strategic bombing.

There seems to be a general feeling that somehow we ought to try to stop the arms race right now, that the crying need of the hour is a standstill agreement on armaments which will give us a breathing spell.

Do these questions, suggestions, or proposals point a way to the solution of the problem with which we are faced? I do not believe so. I rather believe that we shall not be able to make any progress unless we first review our overall foreign policy. I believe that the crying need of the hour is a standstill agreement not on armaments, but rather on Germany. For what Russia and the United States may do in Germany in the near future might create a situation which cannot be remedied later. It might deprive Russia and the United States of freedom of action as far as disarmament and peace are concerned.

You probably know the story of the drunk who was poking under a street lamp in Trafalgar Square in London ^{when} ~~and~~ a policeman tapped him on the shoulder and asked him what he was doing there. "I am looking for my house key," said the drunk. "Did you lose it here?" asked the policeman. "No," said the drunk, "I lost it in Soho." "If you lost it in Soho," said the policeman, "why, then, do you look for it here under this lamp?" "Well," said the drunk, "There is light here, and in Soho it is dark."

My point is, that the key to the control of atomic bombs does not lie in the narrow area of atomic energy on which the spotlights of public discussion are focused, but rather in the dark fields of our overall foreign

policy which are only scantily illuminated by occasional comments.

The Real Issue

What is the real issue between Russia and the United States?

What is the main goal of our present foreign policy in Europe?

In 1939 [✓] Great Britain decided to go to war with Germany rather than to accept a situation in which one country would militarily dominate the continent of Europe. The war was won, but when it ended, one country, Russia, had an overwhelmingly dominant military position on the continent of Europe. Soon after the war ended, Belgium, France, and Holland were militarily at the mercy of Russia in the sense that the Russian land armies could have overrun these countries.

We would rather not leave Western Europe for long at the mercy of Russia if we can help it. We ^{have} hoped to strengthen and arm Western Europe to the point where it could successfully resist a Russian attack until an American expeditionary force could come to its assistance.

Because ^{we have been} ~~we were~~ thinking in these terms ^{for} ~~in~~ the last few years, we were not willing to consider an agreement providing for general disarmament, which Russia appeared to desire. For general disarmament--so we argued--could not touch Russia's main source of military strength ~~which lies~~ in her large manpower; ~~and~~ which enables her at short notice to put into the field huge land armies. Thus general disarmament would perpetuate a situation in which France, Belgium, and Holland ~~XXXXXXXXXXXXXXXXXXXX~~ ^{are} ~~would be~~ militarily at the mercy of Russia.

By integrating Western Germany politically and economically with the rest of Western Europe, we ^{have} hoped to strengthen Western Europe to the point where it would be capable of holding an attack by the Russian armed forces.

Is Our Goal Attainable?

The first question I am going to raise [✓] is whether this goal of our foreign policy is still attainable now that Russia will soon have an appreciable quantity of bombs.

Western Europe, Because of the importance which a few large cities play in her structure, ^{is} is exceedingly vulnerable to atomic bombs. When Russia will be in a position to deliver such bombs in quantity anywhere in Europe, and when there will be nothing that America can do to protect European cities from destruction at the outbreak of the war, then the

Atlantic Pact will have lost much of its value to Europe.

The rearmament of Western Germany would enormously strengthen the military power of Western Europe, and it will therefore undoubtedly be advocated on the ground that it is a calculated risk. But I believe it would be more correct to say that it is an in-calculable risk.

Perhaps Western Germany, rearmed, would fight on our side. Perhaps even without rearming Western Germany, we could make Western Europe strong enough militarily to offer us a base of military operations; perhaps in spite of bombs the French would hold out; perhaps there would be no Dunkirk. Maybe we could count on France as our military base in case of war and thus avoid the need to plan on establishing bridgeheads in Europe (on hostile shores)

On questions of this sort, it is difficult ~~to~~ to speak with any degree of assurance. There may be doubt either way, and I am content here, having raised the question, to leave it unanswered.

A Choice Must Be Made

But now we have to answer another question. Can we continue to pursue our foreign policy aimed at preventing Russia from remaining in an overwhelmingly dominant military position on the continent of Europe, and can we at the same time, obtain an agreement with Russia on eliminating atomic bombs from national armaments.²

To this question my answer is a clear and unequivocal NO.

As long as we hold on to our present political goal in Europe, Russia will hardly be willing to deprive herself of the one weapon which, in the long run, might induce Western Europe to abandon her alliance with the United States. And even if this consideration did not weigh heavily with Russia, as it probably does, there is still this to be said:

Any effective agreement relating to disarmament and the elimination of atomic bombs must of necessity provide for measures of inspection of considerable scope. But under present conditions, Russia has valid reasons to keep the location of her key industrial installations secret, and therefore looks upon the iron curtain as her most important strategic defense. As long as we continue to regard France, Belgium, and Holland as a base of military operations against Russia, as long as we remain in a position to rearm Western Germany if we choose to do so, as long as we keep on devel-

oping long-range rockets as well as long-range bombers and actually remain in the possession of a considerable fleet of such bombers, and as long as we consider strategic bombing of Russia as the means of defending our allies, Russia will have valid reasons for refusing to enter into any agreement that provides for international inspection of installations on her territory.

Clearly international inspection, if it is to be effective, is not compatible with the degree of secrecy which Russia is anxious to maintain under the present conditions and which she believes she is successful in maintaining.

I conclude that an agreement between Russia and the United States on atomic disarmament is incompatible with the continuation of our present policy in Europe. We shall have to choose the one or the other, and clearly, this is not a choice to be lightly made.

What Use Is an Agreement?

Suppose then, for the sake of argument, that we are inclined to give preference to atomic disarmament and want to secure a peace settlement that would provide for general disarmament as well as the elimination of atomic bombs, is there any way for us not only to obtain such a settlement but actually to secure peace? Is there any way for us to offer France, Belgium, and Holland any security short of militarily counter-balancing the Russian land armies in Europe? To what principles can we look in a search for a method to give ~~them~~ ^{these countries} security?

These are the questions that I now propose to examine.

At the end of the First World War, peace could have been secured if the Western World had embraced the principle of collective security. The Second World War would probably not have occurred if collective action had been taken against Japan in 1931 when she invaded Manchuria, and failing that, if, by collective action, an oil embargo had been imposed on Italy when she attacked Abyssinia. All this time, Germany was watching on the sidelines, and when Italy was allowed to get away with it, she drew her conclusions.

The thesis that collective security could secure the peace was true after the First World War, but at that time it was rejected; today this thesis seems to be generally accepted, but it is no longer true. At least it is not true where Russia and the United States are concerned.

Russia and America are each militarily so powerful that no likely combination of nations would be in a position to coerce either of them. Moreover, militarily, the more important nations of the world must be considered as allies of either Russia or America and could not be expected to participate in collective action against their ally.

~~As a result of this,~~ While it is a necessary prerequisite of peace that an agreement be reached between America and Russia, today there is no possible way to enforce such an agreement on the basis of collective security. And here we come to some vital questions:

"What is the use," you may ask, "to concluded an agreement if it cannot be enforced?" You may ask, "Can Russia be trusted to keep an agreement?"

Clearly a general peace settlement will deal with issues that are vital for America and Russia, and when such issues are at stake, nations cannot be trusted to keep an agreement unless the agreement is compatible with their vital interests, and keeps on serving their vital interests.

"What, then," you may ask, "is the use of concluding an agreement if the contracting parties can be trusted only to keep it as long as it suits them to do so?"

As I see it, this is the crucial question, and war or peace ^{might} turn upon our finding the right answer to this question.

I believe that today the problem of securing peace reduces itself to the successful accomplishment of two tasks: first, the drafting of an agreement which will reconcile the vital interests of America and Russia; and second, having concluded such an agreement, the adoption by both the United States and Russia of policies that will insure that the agreement will continue to be in accordance with each other's vital interests. Unless these requirements are met, the agreement will be of no value.

In the absence of any possibility of enforcement, the agreement will be of value only if it is so well balanced and so well adjusted to the real interests of the contracting parties that, if it were to ~~be~~ ^{lapse}, they would ~~wish~~ would wish to conclude it anew, of their own free will. An agreement that fulfills this requirement, might be said to be self-regenerating.

Could this requirement be met? I rather believe so.

If we approach the problem of drafting an agreement on the basis of such considerations, then clearly we must not consider our own interests

only, but it is equally important to ask ourselves what the interests of our ~~allies~~^{friends} in Western Europe are and what the interests of Russia are-- what these interests are today and what they are likely to be in the future.

And even though Germany might not be one of the negotiating parties and an agreement might be imposed upon her, we will still have to be fully aware of her vital interests. For if we want to have peace, we shall have to make sure that the agreement does not run counter to her vital interests either.

Outlines of a Possible Agreement

If we are ever to get an overall agreement, it is high time that the public discussion of such an agreement should get under way. Naturally the first tentative proposals will look foolish later, as public discussion reaches more advanced stage. But because a start has to be made somewhere, sometime, it might as well be made right here and now. I shall therefore make an attempt to enumerate a number of points which such an agreement might comprise.

The basic philosophy of this tentative proposal is to balance in the agreement a major point in favor of Russia against a major point in favor of America. The agreement centers around a completely demilitarized but federally united Germany, not even precluding the possibility of a union of Austria with Germany.

The point in America's favor would be that this united Germany would be economically integrated with the rest of Western Europe.

The point in favor of Russia would be that America would accept the fact that Russia will have a military position of overwhelming dominance on the continent of Europe.

France, Belgium, and Holland would cease to be allies of the United States. They would form a neutral bloc of their own, with the United States guaranteeing their neutrality in the sense that as long as Russia does not violate the neutrality of any one of them, the United States will respect the neutrality of all of them. With respect to them, the United States would assume a unilateral obligation to go to war with Russia if Russia should invade any of them or force any of them to surrender.

The agreement would provide for a continental customs union in Europe which would include Germany, and freely exchangeable currencies among all

the members of that union.

The agreement would provide for the elimination of atomic bombs from national armaments, for general disarmament, and for inspection of sufficient scope to make the provisions relating to disarmament effective.

Before going any further, there are two questions we must settle in our minds:

1) If we resign ourselves to permit Russia to occupy militarily such an overwhelmingly dominant position in Europe, what then would prevent Russia from overrunning Germany, France, Belgium, and Holland? But perhaps we ought rather to ask what would induce Russia to overrun Germany, France, Belgium, or Holland. For clearly such an invasion would mean war with the United States, and notwithstanding the degree of disarmament that might be agreed upon, the potential strength of the United States in case of war, will remain very great. Russia would therefore hardly provoke war with the United States without some very important reason for doing so.

Naturally, if Russia were willing to fight a world war for the sake of establishing Communist governments in Germany, France, Belgium, and Holland, there is nothing in the set-up here proposed that would prevent her--~~after a short period of initial resistance by France, Belgium, and Holland--~~^{occupying} ~~from invading~~ ^{after some initial resistance} all of Western Europe. There are those who believe that Russia would do just this, and who believe that if it hadn't been for the atomic bomb, Russia would have invaded Western Europe soon after the war was over. Those who believe this to be true must of necessity reject the solution which is being discussed here, but they must also of necessity conclude that there is no chance of achieving atomic disarmament. They are entitled to their opinion, but they ought to draw the logical conclusion from it that there is nothing left for America to do now but to step up the atomic arms race. What that will lead to I am not prepared to discuss on this occasion.

The rest of us who do not go along with that view, must examine whether Western Europe could achieve security short of militarily counterbalancing the Russian land armies. Security based on military strength is not the only way to achieve security, nor does military strength necessarily provide security. ~~As a matter of fact, there is reason to believe that~~ ^{and} as time goes on and distances shrink, fewer and fewer nations will be able to attain security based on military strength.

The security of Mexico with respect to the United States is not based on military strength, nor is the security of Mexico absolute, and neither is her freedom of action absolute. For Mexico might no longer be secure if she decided to conclude an alliance with Russia and if Russia were to look upon Mexico as a base of military operations against the United States.

I should be inclined to think that Western Europe would be more secure from military action by Russia under the proposed set-up than it is today. For even in case of war with America, Russia might hesitate to violate the neutrality of Western Europe if by doing so, she would enable the United States to use Western Europe as a base of operations against her.

2) Military action, however, is not the only way by which Russia could conceivably conquer Western Europe. There will be those who think that Russia need not risk a world war in order to conquer Western Europe, that ~~Communism~~ ^{Russia} can conquer it through ~~Russian~~ ^{communist} propaganda.

To ~~me~~ ^{it} seems rather curious that on the one hand, we tend to underestimate Russia's military power, and on the other hand, we tend to overestimate Russia's political power. Immediately after the war, Russia succeeded in creating Communist governments which are subservient to her in Poland, Rumania, and Bulgaria, and somewhat later in Hungary as well as Czechoslovakia. But in all these countries, Russia succeeded in this because Russian troops had moved in and under their protection, a police force was established which was subservient to Russia. Yugoslavia, where Russian troops did not move in, has a Communist government, but her government is not subservient to Russia.

The popular concept that in countries like Italy, France, Belgium, or Holland, Russia might gain power through an armed insurrection of a political minority, is not supported by any precedent. To transform a group of civilians in opposition to the established order into a fighting force, that can successfully meet in peacetime the organized military and police forces of the established government, is a task exceedingly difficult ~~to accomplish.~~ ^{to accomplish.} To my knowledge, it has never been accomplished in any European country in modern times.

X
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 If we thus tentatively conclude that an overall agreement of the type proposed above is worth considering, then we must now examine the chances

of Russia's accepting inspection and of getting inspection to operate in a satisfactory manner.

Should the proposed agreement in fact eliminate Russia's valid reasons for objecting to inspection, would then Russia be likely to welcome inspection?

Russia would even then probably dislike the notion of inspection and everything that goes along with it. For secrecy is habit forming as atomic scientists very well know from their own experience. Secrecy tends to persist long after the reasons which brought it into existence have ceased to be operative. You start off with secrecy for the sake of security and you end up with secrecy for the sake of secrecy.

Yet when an agreement is offered to Russia from which she would have much to gain and which would make secrecy appear unimportant to her, Russia might overcome her reluctance to inspection.

In this respect we have an encouraging precedent in the record of the UNRRA control commissions that operated in Byelo-Russia and in the Ukraine. Here we offered Russia something she wanted--relief, and we asked for something that she did not want to give--freedom of movement for the Control Commission. Russia accepted our terms because she needed the relief. And she continued to grant freedom of movement to the Control Commission because she continued to need ^{the} relief.

We may dislike the Russian system of government, but at least it has this advantage: once agreement is reached on the highest level there is no sabotaging of the agreement at the lower levels. It might very well be that if we reach an agreement with Russia which provides for inspection, we would encounter even less trouble in Russia with inspection than she might encounter in the United States.

Yet we must squarely face the fact that the United States or Russia might have grievances arising from the implementation of the agreement and that it is difficult to conceive of any international body to which both Russia and the United States could entrust the right to adjudicate such grievances. The only effective recourse that Russia and the United States would have in such a situation would be to record their complaint and to press for a remedy. And in the absence of any adjudication of the complaint ~~xxxxxx~~ they can effectively press for a remedy only if they have

the right to abrogate the agreement. If either of them fails to live up to the clauses of the agreement which relate to disarmament and inspection, this might involve a vital threat to the other's security. ~~It is,~~ It is, therefore, logical that the United States and Russia should retain the right legally to abrogate in self-defense. Paradoxical though it may seem, it might very well be true that the danger that the agreement will in fact be abrogated is less if Russia and America have the legal right to abrogate it.

It would be advisable, of course, to provide in the agreement for a cooling-off period before an abrogation would become final and go into effect.

Within the framework of an overall agreement, the problem of Eastern Europe will have to be settled somehow. Shall we reconcile ourselves to Russian domination of Poland, Rumania, and Bulgaria? I think that probably we shall not have much choice in this matter. We might raise the question of Hungary and ~~even more important would be~~ ^{it would be} to raise the question of Czechoslovakia. For she, among all these countries, is the only one that has a long and successfully established democratic tradition. To return to a democratic form of government in Yugoslavia would also be of importance, but if anything can be done about this, the United States can do more about it at present than could Russia.

If we create a united Germany, one might consider whether the overall agreement should not provide for the return to Germany, at some fixed future date, the German territories which have been occupied by Poland. This in turn might make it necessary to compensate Poland by the return of at least some of the territories which Poland ceded to Russia with our approval. Because of the increasing domination of Poland by Russia, Russia's reluctance to cede territory to Poland might be less than it otherwise would be.

In this connection, Poland might be given further compensation in the form of large-scale economic aid aimed at the building up of her consumers' goods industries.

Such economic aid to Poland ought to be part of the general economic provisions of the agreement which might ~~secure~~ ^{provide} ~~both Western and Eastern Europe~~ ^{Prussia} ~~including Russia~~ economic assistance ~~on the part of~~ ^{from} the United States for an extended period of time. The greater Russia's stake would be in the economic revival of Europe, and the longer the period would be for which America would agree to assist in this revival, the greater confidence we could have in continued Russian cooperation.

Of all the problems involved in the making of peace, the most difficult is probably the creation of a prosperous and peaceful Germany--a Germany which is demilitarized and which both Russia and the United States can trust to remain demilitarized.

A necessary condition for a peaceful Germany is to have satisfied those national aspirations of Germany on which the overwhelming majority of the German people are likely to unite. Dismembering Germany, prohibiting Austria from joining a German federal union, or artificially limiting Germany's output of commodities, ought to be ruled out on this basis alone.

But even so, it is a foregone conclusion that in the years to come there will be a strong nationalistic movement in Germany.

How can we be sure that the police forces in Germany will not become subservient to a nationalistic movement? This latter problem cannot be solved simply by decentralizing the German police, for instance by subdividing it into the police forces of the individual German states. For the danger does not primarily lie in the transformation of these police forces into an army, but rather in the possibility that by capturing the police forces, the nationalistic movement may capture the government of Germany. Once that happens, then demilitarization of Germany could be enforced only by armed intervention which would upset the stability of Europe.

But even assuming the police force to be safe, if Germany is a democracy ~~---like she was in time of~~ ^{patterned on} the Weimar Republic--a nationalistic movement might legally capture the government. What kind of political structure could we give Germany that would preclude this danger?

Superimposing some inter-allied control commission upon the government of Germany would hardly provide a workable solution to this problem. The creation of a supra-national governmental authority in Europe might solve it, but few countries in Europe would at present be willing to accept the restrictions which such a solution would impose on national sovereignty.

The question of Germany's political structure thus poses a problem which is probably incapable of a solution within the framework of established precedent. Something new, some thing imaginative, may have to be adopted. Perhaps we ought to base our thinking on the fact that the countries in Europe are strongly interdependent. What the German government does affects not only Germany, it affects all of Germany's neighbors. Perhaps it would

be possible to base the government of Germany on a political structure that would take into account the fact of this interdependence. But to elaborate upon this point would go beyond the scope of this paper.

We have almost exclusively concerned ourselves here with the Russian-American conflict. There are other conflicts in the world which require attention. But if the Russian-American conflict is settled, the United Nations will come into its own. The edifice of the United Nations was erected on the premise that the great powers ^{would} ~~will~~ act in agreement with each other. When that premise ~~will~~ ^{is true} hold, the United Nations will be able to function as it was meant to function.

In the absence of a settlement in the Russian-American conflict, the danger that the atomic arms race will now begin in earnest is very great and the risk that this will involve for ourselves, as well as mankind, ^{for all} is incalculable. The overall agreement proposed here might not be favored by those whose only concern is that the United States shall be in the best possible strategic position if war comes. But unless we are willing to accept a less favorable strategic position for the sake of ~~greatly~~ improving our chances ^{of} ~~to~~ ^{ing} attain peace, we might be unable to make any progress towards peace.

Because it may take time to re-evaluate our foreign policy, it might be necessary to arrive at some informal agreement with Russia to make sure that in the meantime no irrevocable decisions are taken on the German issue by either Russia or America.

Any attempt to ~~make~~ a new start and to try to negotiate with Russia on the issue of atomic disarmament without being ready to remove the major obstacle that stands in its way; i.e. without being ready to settle the basic strategic conflicts in Europe, can only lead to disappointment. The negotiations on atomic disarmament have failed once, and that is unfortunate. Allowing them to fail a second time, might be disastrous.